United States Department of the Interior
Bureau of Land Management

Environmental Assessment
DOI-BLM-UT-C020-2013-027-EA

February 2014

May 2014 Oil and Gas Lease Sale

Location: Color Country District, Richfield and St. George Field Offices
Sanpete, Sevier, and Washington Counties, Utah

Applicant/Address: U.S. Department of the Interior
Bureau of Land Management
Utah State Office
440 West 200 South, Suite 500
Salt Lake City, Utah 84145-0155

Color Country District Office
176 East DL Sargent Drive
Cedar City, Utah 84721
Office 435-865-3000
FAX 435-865-3058

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1.0 PURPOSE & NEED

1.1 Introduction

The Bureau of Land Management (BLM) has prepared this environmental assessment (EA) to disclose and analyze the environmental consequences of leasing fifty-four parcels totaling 67,555.92 acres during the May 2014 oil and gas lease sale and subsequent lease issuance to successful bidders. The EA is a site-specific analysis of potential impacts that could result from the implementation of a proposed action or alternatives to the proposed action. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any significant impacts could result from the analyzed actions. Significance is defined by NEPA and is found in regulation 40 Code of Federal Regulations (CFR) 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of Finding of No Significant Impact (FONSI). A FONSI statement for this EA would document the reasons why implementation of the selected alternative would not result in significant environmental impacts (effects) beyond those already addressed in the Richfield Field Office Record of Decision and Resource Management Plan (RFO ROD/RMP; BLM, 2008) and the St. George Field Office Record of Decision and Resource Management Plan (RMP; 1999). If the decision maker determines that this project has significant impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record may be signed for the EA approving the selected alternative, whether the proposed action or another alternative.

1.2 Background

The BLM policy is to make mineral resources available for use and to encourage their orderly development to meet national, regional, and local needs. This policy is based in various laws, including the Mineral Leasing Act of 1920 and the Federal Land Policy and Management Act of 1976. The Federal Onshore Oil and Gas Leasing Reform Act of 1987 (Sec. 5102(a)(b)(1)(A)) directs the BLM to conduct quarterly oil and gas lease sales in each state whenever eligible lands are available for leasing. Leases would be issued pursuant to 43 CFR subpart 3100.

Expressions of Interest (EOI) are submitted by the public. These EOIs are then divided into logical parcels. In general, the BLM Utah State Office (USO) conducts a quarterly competitive lease sale to sell available oil and gas lease parcels in the state. Anyone submitting a formal EOI which includes split estate lands – private surface/Federal minerals – must provide, with the EOI, the name and address of the current private surface owners(s). When a split estate parcel is under consideration, the BLM sends an initial letter to the surface owners(s). This letter informs the landowner that an EOI has been received which involves their surface ownership. This initial notification provides notice of the scheduled auction and invites their participation on a site visit to the parcel. As described below, after a parcel has gone through an interdisciplinary review and is recommended for leasing, a second letter is sent which elaborates on BLM's regulations and procedures for Federal oil and gas leasing and development on split estate lands.

In the process of preparing a lease sale, the BLM USO compiles a list of lands nominated and legally available for leasing, and sends a preliminary parcel list the appropriate District Office where the parcels are located. Field Office staff then review and verify that the parcels are in areas available for leasing and determine if any new information has become available, or any circumstances have changed. The parcels are then assessed to determine what level of analysis is required and the appropriate stipulations and notices to be included. Appropriate consultations are conducted, when necessary, and that any special resource conditions are identified for potential bidders. The Field Office then either determines that existing analyses provide an adequate basis for leasing recommendations or that additional NEPA analysis is needed before making a leasing recommendation. In most instances an EA will be initiated for the parcels within the Field Office to meet the requirements of Washington Office (WO) Instruction Memorandum (IM) 2010-117.

After the EA is complete, it and an unsigned FONSI are made available to the public along with the parcel list and stipulations/notices for a 30-day public comment period on the Utah Environmental Notification Bulletin Board (ENBB). Additional information and instructions are also made available on the BLM's Oil and Gas Leasing Webpage. After analyzing and incorporating (where appropriate) comments received during the public comment period, changes to the document and/or lease parcels list are made, if necessary. The documents are made available again to the public in connection to the Notice of Competitive Lease Sale (NCLS) protest period (30 days). The protest period ends 60 days before the scheduled lease sale. Lease stipulations and notices applicable to each parcel are specified in the sale notice. If any changes are needed to NCLS parcels or stipulations/notices, an erratum is posted to the BLM oil and gas leasing website to notify the public of the change. The parcels would be available for sale at an oral auction at the UTSO tentatively scheduled for May 20, 2014. If a parcel of land is not purchased at the lease sale by competitive bidding, it may still be leased within two years after the initial offering. A lease may be held for ten years, after which the lease expires unless oil or gas is produced in paying quantities. A producing lease can be held indefinitely by economic production.

A lessee must submit an Application for Permit to Drill (APD) (Form 3160-3) to the BLM for approval and must possess an approved APD prior to any surface disturbance in preparation for drilling. Any stipulations attached to the standard lease form must be complied with before an APD may be approved. Following BLM approval of an APD, a lessee may produce oil and gas from the well in a manner approved by BLM in the APD or in subsequent sundry notices. The operator must notify the appropriate authorized officer, 48 hours before starting any surface disturbing activity approved in the APD.

The BLM received nominations for sixty-nine subject parcels (sixty-five on the Richfield Field Office and four on the St. George Field Office) to be leased for oil and gas development (see Appendix A, May 2014 Preliminary Oil and Gas Lease Sale List; Appendix B, Map of Parcels). After an initial review the four parcels on the St. George Field Office (UT0514-025, UT0514-026, UT0514-028, and UT0514-031) and sixteen parcels on the Richfield Field Office (all of parcels UT0514-007, UT0514-109, UT0514-110, UT0514-111, UT0514-114, UT0514-116, UT0514-117, UT0514-131, UT0514-134, UT0514-139, and UT0514-140; and portions of parcels UT0514-128, UT0514-132, UT0514-133, UT0514-135, and UT0514-136) were recommended to be deferred from the lease sale (see rationale in Appendix D – Deferred Parcel List). This EA has been prepared to disclose and analyze the environmental consequences of the

sale of fifty-four parcels during the May 2014 Oil and Gas Lease Sale. The mineral rights for these parcels are owned by the federal government and administered by the RFO (see Appendix B). Parcels UT0514-043, UT0514-056, UT0514-057, UT0514-058, UT0514-059, UT0514-060, UT0514-061, UT0514-064, UT0514-080, UT0514-089, UT0514-092, UT0514-125, UT0514-126, UT0514-127, UT0514-136, UT0514-137, UT0514-138, and UT0514-141 have split estate where all or part of these parcels have federal minerals and private surface ownership (see Appendix B for maps of the parcels). This EA is being used to determine the necessary administrative actions, stipulations, lease notices, special conditions, or restrictions that would be made a part of an actual lease at the time of issuance. Under all alternatives, continued interdisciplinary support and consideration would be required to ensure on the ground implementation of planning objectives, including the proper implementation of stipulations, lease notices and Best Management Practices (BMPs) through the Application for Permit to Drill (APD) process.

1.3 Need of the Proposed Action

The parcels proposed for leasing were nominated by the public. The need for the sale is to respond to the public's nomination requests. Offering parcels for competitive oil and gas leasing provides for the orderly development of fluid mineral resources under BLM's jurisdiction in a manner consistent with multiple use management and environmental consideration for the resources that may be present.

Utah is a major source of natural gas for heating and electrical energy production in the lower 48 states. Continued sale and issuance of lease parcels maintains options for production as oil and gas companies seek new areas for production or attempt to develop previously inaccessible or uneconomical reserves.

1.4 Purpose of the Proposed Action

The purpose of the sale is to ensure that adequate provisions are included in the lease stipulations to protect public health and safety and assure full compliance with the objectives of NEPA and other federal environmental laws and regulations designed to protect the environment and mandating multiple use of public lands. The sale of oil and gas leases is needed to meet the growing energy needs of the United States public. The BLM is required by law to review areas that have been nominated; additionally there has been ongoing interest in oil and gas exploration in the RFO area in recent years. Oil and gas leasing is a principal use of the public lands as identified in Section 102(a)(12), 103(1) of the Federal Land Policy and Management Act of 1976 (FLPMA), and it is conducted to meet requirements of the Mineral Leasing Act of 1920, as amended, the Mining and Minerals Policy Act of 1970, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987 (Reform Act). Leases would be issued pursuant to 43 CFR subpart 3100.

1.5 Conformance with BLM Land Use Plan

The alternatives described below are in conformance with RFO ROD/RMP, as maintained (BLM, 2008) because they are specifically provided for in the planning decision.[1] They conform to the following Land Use Plan (LUP) decisions (RMP Table 19 pages 132-133):

MIN-1. Issue oil and gas leases and allow for oil and gas exploration and development.

MIN-6. Lease split-estate lands according to BLM RMP stipulations for adjacent or nearby public lands or plans of other surface management agencies as consistent with federal laws, 43 CFR 3101, and the surface owner's rights.

MIN-9. In accordance with an UDEQ-DAQ letter dated June 6, 2008, (see Appendix 13) requesting implementation of interim nitrogen oxide control measures for compressor engines; BLM will require the following as a Lease Stipulation and a Condition of Approval for Applications for Permit to Drill:

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NOx per horsepower-hour.

MIN-10. Area closed to leasing: 447,300 acres

MIN-11. Manage fluid mineral leases as shown on Map 23:

- Areas open to leasing with standard lease terms: 608,700 acres
- Areas open to leasing subject to Controlled Surface Use (CSU) and/or timing limitations: 917,500 acres
- Areas open to leasing subject to No Surface Occupancy (NSO): 154,500 acres

It is also consistent with RMP decisions and their corresponding goals and objectives related to the management of, including but not limited to, air quality, BLM natural areas, cultural resources, recreation, riparian, soils, water, vegetation, fish & wildlife, and Areas of Critical Environmental Concern (ACEC) as well as the Surface Stipulations Applicable to Oil and Gas Leasing and Other Surface Disturbing Activities (Appendix 11 of the RMP/ROD).

Standard lease terms provide for reasonable measures to minimize adverse impacts to specific resource values, land uses, or users (Standard Lease Terms are contained in Form 3100-11, Offer to Lease and Lease for Oil and Gas, U.S. Department of the Interior, BLM, October 2008). 43 CFR 3101.1-2 states: "A lessee shall have the right to use as much of the leased lands as is necessary to explore for, drill for, mine, extract, remove and dispose of all the leased resources in leasehold subject to: Stipulations attached to the lease; restrictions deriving from specific, non-discretionary statutes; and such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations." Compliance with valid, nondiscretionary statutes (laws) is included in the

[1] Because the Washington County parcels were deferred, additional discussion of the St. George ROD/RMP is not necessary here.

standard lease terms and would apply to all lands and operations that are part of all of the alternatives.

Nondiscretionary actions include the BLM's requirements under federal environmental protection laws, such as the Clean Water Act, Clean Air Act, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), and FLPMA, which are applicable to all actions on federal lands even though they are not reflected in the oil and gas stipulations in the RMP and would be applied to all potential leases regardless of their category. Also included in all leases are the two mandatory stipulations for the statutory protection of cultural resources (BLM WO IM 2005-03, Cultural Resources and Tribal Consultation for Fluid Minerals Leasing) and threatened or endangered species (BLM WO IM-2002-174, Endangered Species Act Section 7 Consultation).

1.6 Relationship to Statutes, Regulations, or Other Plans

The proposed action is consistent with federal environmental laws and regulations, Executive Orders, and Department of Interior and BLM policies and is in compliance, to the maximum extent possible, with state laws and local and county ordinances and plans to the maximum extent possible, including the following:

- Federal Land Policy and Management Act (1976) as amended and associated regulations found at 43 CFR 2800
- Taylor Grazing Act (1934) as amended
- Utah Standards and Guidelines for Rangeland Health (1997)
- National Historic Preservation Act (1966) as amended and associated regulations at 36 CFR Part 800
- Bald and Golden Eagle Protection Act (1962)
- Endangered Species Act (1973) as amended
- BLM Manual 6840- Special Status Species Management
- Migratory Bird Treaty Act (1918)
- Utah Partners in Flight Avian Conservation Strategy Version 2.0 (Parrish et al., 2002)
- Birds of Conservation Concern 2002 (USFWS 2008)
- Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds
- MOU between the USDI BLM and USFWS to Promote the Conservation and Management of Migratory Birds (4/2010)
- National Sage-grouse Habitat Conservation Strategy (BLM 2004)
- Strategic Management Plan for Sage-grouse 2002 (UDWR 2002)
- Western Association of Fish and Wildlife Agencies, Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats (Connelly et al. 2004)
- WO IM 2012-043 Greater Sage-Grouse Interim Management Policies and Procedures
- WO IM 2012-044 BLM National Greater Sage-Grouse Land Use Planning Strategy
- Utah Supplemental Planning Guidance: Raptor Best Management Practices (BLM UTSO IM 2006-096)
- Oil and Gas Leasing Reform – Land Use Planning and Lease Parcel Reviews (BLM WO IM 2010-117)
- Determining Conformity of Federal Actions to State or Federal Implementation Plans (40 CFR Part 93 Subpart E)

- MOU Among the USDA, USDI and EPA Regarding Air Quality Analysis and Mitigation for Federal Oil and Gas Decisions Through the NEPA Process (2011)
- Richfield Field Office Visual Resource Inventory (2011)
- Sanpete County Master Plan as revised.
- Richfield Field Office Draft Environmental Impact Statement and Draft Resource Management Plan (2007).
- Richfield Field Office Final Environmental Impact Statement and Proposed Resource Management Plan (2008).
- Richfield Field Office Record of Decision and Approved Resource Management Plan (2008).

These documents, and their associated analysis or information, are hereby incorporated by reference, based on their use and consideration by various authors of this document. BLM is also utilizing the analysis contained in the Draft and Final Environmental Impact Statement prepared for the land use plan as it relates to the selected alternative in the ROD. The attached Interdisciplinary Team Checklist, Appendix C, was also developed after consideration of these documents and their contents. Each of these documents is available for review upon request from the RFO. Utah's Standards for Rangeland Health address upland soils, riparian/wetlands, desired and native species and water quality. These resources are either analyzed later in this document or, if not impacted, are also listed in Appendix C.

1.7 Identification of Issues

The proposed action was reviewed by an interdisciplinary parcel review (IDPR) team composed of resource specialists from the RFO. This team identified resources in the parcel areas which might be affected and considered potential impacts using current office records and geographic information system (GIS) data, and site visits. The UTSO specialists for air quality, wildlife, cultural resources, special designations, visual resources and solid minerals reviewed the proposal.

On August 7, 2013, the UTSO sent letters to the National Park Service (NPS), United States Fish and Wildlife Service (USFWS), United States Forest Service (USFS) and the State of Utah's Public Lands Policy Coordination Office (PLPCO), Utah Division of Wildlife Resources (UDWR) and the State Institutional Trust Lands Administration (SITLA) to notify them of the pending lease sale, solicit comments and concerns on the preliminary parcel list and invite them to participate in site visits. The IDPR team conducted site visits to all parcels to validate existing data and gather new information in order to make an informed leasing recommendation on August 14, 2013, and August 27-28, 2013. None of the other agencies or private landowners participated in the site visits with the RFO IDPR team. The results of the IDPR team review are contained in the Interdisciplinary Team Checklist, Appendix C.

Public notification was initiated by entering the project information on the ENBB[2] on October 25, 2013. The EA and unsigned FONSI were posted for public review and comment from December 20, 2013 through January 27, 2014. Additional information for the public is maintained on the Utah BLM Oil and Gas Leasing Webpage.[3] Additional information on public participation is available in Section 5.3.

1.8 Summary

This chapter has presented the purpose and need of the proposed project, as well as the process for identifying issues and resources that could be affected by the implementation of the proposed project. In order to meet the purpose and need of the proposed project in a way that resolves the issues, the BLM has considered and/or developed a range of alternatives. These alternatives are presented in Chapter 2. The affected environment will be described in Chapter 3 for the issues analyzed. The potential environmental impacts or consequences resulting from the implementation of each alternative considered in detail are analyzed in Chapter 4 for each of the identified issues.

[2] The ENBB is a BLM environmental information internet site and can be accessed online at: https://www.blm.gov/ut/enbb/index.php

[3] Accessed online at: http://www.blm.gov/ut/st/en/prog/energy/oil_and_gas/oil_and_gas_lease.html

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1 Introduction

This environmental assessment focuses on the Proposed Action and No Action alternatives. Other alternatives were not considered in detail because the issues identified during scoping did not indicate a need for additional alternatives or mitigation beyond those contained in the Proposed Action. The No Action alternative is considered and analyzed to provide a baseline for comparison of the impacts of the Proposed Action.

2.2 Alternative A – Proposed Action

Fifty-four parcels within the jurisdiction of the RFO have been proposed for sale in the May 2014 Oil and Gas Lease Sale to be held at the Utah BLM State Office. The nominated parcels would be offered with additional resource protection measures consistent with the RFO RMP (BLM, 2008). Legal descriptions of each parcel can be found in Appendix A, and maps of the nominated parcels can be found in Appendix B. All of the acreage proposed to be leased has been identified as being either open to leasing subject to standard lease terms, or open to leasing subject to minor constraints such as seasonal restrictions, or open to leasing with no surface occupancy in the RFO RMP (RMP; see Map 23).

Leasing is an administrative action that affects economic conditions but does not directly cause environmental consequences. However, leasing is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a NSO stipulation. Potential oil and gas exploration and production activities, committed to in a lease sale, could impact other resources and uses in the planning area. Direct, indirect, or cumulative effects to resources and uses could result from as yet undetermined and uncertain future levels of lease exploration or development.

Although at this time it is unknown when, where, or if future well sites or roads might be proposed on any leased parcel, should a lease be issued, site specific analysis of individual wells or roads would occur when a lease holder submits an Application for Permit to Drill (APD). For the purposes of this analysis, the BLM assumed that one well pad with access road would be constructed on each lease subject to the terms, conditions, and stipulations of the lease. This would imply that over the next 10 years (the life of a lease that is not held by production) 54 locations could be drilled, with the potential surface disturbance of approximately 648 acres (assuming approximately 12 acres per drill pad and access road). These figures are estimated in the Reasonably Foreseeable Development Scenario (Appendix 12 of the RMP/ROD). In general, activities are anticipated to take place as described in the following sections.

Standard lease terms would be attached to all issued leases. These terms provide for reasonable measures to minimize adverse impacts to specific resource values, land uses, or users (Standard Lease Terms are contained in Form 3100-11, Offer to Lease and Lease for Oil and Gas, U.S. Department of the Interior, BLM, October 2008). Once the lease has been issued, the lessee has the right to use as much of the leased land as necessary to explore for, drill for, extract, remove, and dispose of oil and gas deposits located under the leased lands subject to lease stipulations, however, operations must be conducted in a manner that avoids unnecessary or undue degradation of the environment and minimizes adverse impacts to the land, air, water, cultural, biological, and visual elements of the environment, as well as other land uses or users.

Compliance with valid, nondiscretionary statutes (laws) is included in the standard lease terms and would apply to all lands and operations that are part of all of the alternatives. Nondiscretionary actions include the BLM's requirements under federal environmental protection laws, such as the Clean Water Act, Clean Air Act, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), and Federal Land Policy and Management Act (FLPMA), which are applicable to all actions on federal lands even though they are not reflected in the oil and gas stipulations in the RMP and would be applied to all potential leases regardless of their category. Also included in all leases are the two mandatory stipulations for the statutory protection of cultural resources (BLM WO IM-2005-03, Cultural Resources and Tribal Consultation for Fluid Minerals Leasing) and threatened or endangered species (BLM WO IM-2002-174, Endangered Species Act Section 7 Consultation).

2.2.1 Well Pad and Road Construction

Equipment for well pad construction would consist of dozers, trackhoes, and graders. All well pads would be reclaimed. Topsoil from each well pad would be stripped to a minimum depth of six inches and stockpiled for future reclamation. Interim reclamation of the pad would occur if the well produces commercial quantities of oil or gas. Interim reclamation involves a reduction of the drill pad to a size that accommodates the functions of a producing well. The topsoil would be spread over the interim reclamation area, seeded, left in place for the life of the well, and then used during the final reclamation process. If the well is not productive final reclamation of the pad and constructed road would begin. Disturbance for each well pad would be estimated at an area of approximately 4 acres of land, including topsoil piles. Disturbed land would be seeded with a mixture (certified weed free) and rate as recommended or required by the BLM.

Depending on the locations of the proposed wells, it is anticipated that some new or upgraded access roads would be required to access well pads and maintain production facilities. Any new roads constructed for the purposes of oil and gas development would be utilized year-round for maintenance of the proposed wells and other facilities, and for the transportation of fluids and/or equipment, and would remain open to other land users. Construction of new roads or upgrades to existing roads would require a 12-24 foot travelway width and would be constructed of native material. It is not possible to determine the distance of road that would be required because the location of the wells would not be known until the APD stage. However, for purposes of analyses it is assumed that disturbance from access roads would be approximately 8 acres (2 miles of road at 4 acres per mile) per well site.

2.2.2 Production Operations

If wells were to go into production, facilities would be located at the well pad and typically include a well head, a dehydrator/separator unit, and storage tanks for produced fluids. The production facility would typically consist of two storage tanks, a truck load-out, separator, and dehydrator facilities. Construction of the production facility would be located on the well pad and not result in any additional surface disturbance.

All permanent surface structures would be painted a flat, non-reflective color specified by the BLM in order to blend with the colors of the surrounding natural environment. Facilities that are required to comply with the Occupational Safety and Health Act (OSHA) would be excluded from painting color requirements. All surface facilities would be painted immediately after installation and under the direction and approval of the BLM.

All operations would be conducted following the "Gold Book", *Surface Operating Standards for Oil and Gas Exploration and Development*. The Gold Book was developed to assist operators by providing information on the requirements for conducting environmentally responsible oil and gas operations on federal lands. The Gold Book provides operators with a combination of guidance and standards for ensuring compliance with agency policies and operating requirements, such as those found at 43 CFR 3000 and 36 CFR 228 Subpart E; Onshore Oil and Gas Orders (Onshore Orders); and Notices to Lessees. Included in the Gold Book are environmental BMPs; these measures are designed to provide for safe and efficient operations while minimizing undesirable impacts to the environment.

If oil is produced, the oil would be stored on location in tanks and transported by truck to a refinery. The volume of tanker truck traffic for oil production would be dependent upon production of the wells.

2.2.3 Produced Water Handling

Water is often associated with either produced oil or natural gas. Water is separated out of the production stream and can be temporarily stored in the reserve pit for 90 days. Permanent disposal options include discharge to evaporation pits or underground injection. Handling of produced water is addressed in Onshore Oil and Gas Order No. 7.

2.2.4 Maintenance Operations

Traffic volumes during production would be dependent upon whether the wells produced natural gas and/or oil, and for the latter, the volume of oil produced. Well maintenance operations may include periodic use of work-over rigs and heavy trucks for hauling equipment to the producing well, and would include inspections of the well by a pumper on a regular basis or by remote sensing. The road and the well pad would be maintained for reasonable access and working conditions. Portions of the well pad not needed for production of the proposed well, including the reserve pit, would be re-contoured and reclaimed, as an interim reclamation of the site.

2.2.5 Plugging and Abandonment

If the wells do not produce economic quantities of oil or gas, or when it is no longer commercially productive, the well would be plugged and abandoned. The wells would be plugged and abandoned following procedures approved by a BLM Petroleum Engineer, which would include requiring cement plugs at strategic positions in the well bore. All fluids in the reserve pit would be allowed to dry prior to reclamation work. After fluids have evaporated from the reserve pit, sub-soil would be backfilled and compacted within 90 days. If the fluids within the reserve pit have not evaporated within 90 days (weather permitting or within one evaporation cycle, i.e. one summer), the fluid would be pumped from the pit and disposed of in accordance with applicable regulations. The well pad would be re-contoured, and topsoil would be replaced, scarified, and seeded within 180 days of the plugging the well.

2.3 Alternative B – No Action

Under the No Action alternative none of the nominated parcels would be offered for sale.

2.4 Alternatives Considered but Eliminated from Further Analysis

A total of sixty-nine parcels were nominated and forwarded to the Color Country District for review. An alternative was considered that included leasing of all these parcels. As introduced in Section 1.2 Background, four parcels on the St. George Field Office (UT0514-025, UT0514-026, UT0514-028, and UT0514-031) and sixteen parcels on the Richfield Field Office (all of parcels UT0514-007, UT0514-109, UT0514-110, UT0514-111, UT0514-114, UT0514-116, UT0514-117, UT0514-131, UT0514-134, UT0514-139, and UT0514-140; and portions of parcels UT0514-128, UT0514-132, UT0514-133, UT0514-135, and UT0514-136) were recommended to be deferred from the lease sale (see rationale in Appendix D – Deferred Parcel List).

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified in the Interdisciplinary Team Checklist found in Appendix C. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4. Only those aspects of the affected environment that are potentially impacted are described in detail (see Appendix C).

3.2 General Setting

The proposed action would result in the leasing for oil and gas development of fifty-four parcels within the RFO. See Appendix A for legal descriptions and Appendix B for maps of the parcels. Additional information is also contained in the Interdisciplinary Team Checklist (Appendix C).

These parcels range in size from 11.08 to 2,560 acres for a total of 67,555.92 acres. The parcels are located throughout Sevier and Sanpete Counties, Utah (Appendix B – Parcel Maps). The landscape, topography, plant and animal species throughout the proposed parcels to be leased is varied. The area is covered in a mixture of grass and shrubs. Some of the dominant vegetation species are: Wyoming sagebrush, pinyon pine, juniper, Gambel's oak, shadscale, needle and thread grass, Indian ricegrass and greasewood. Areas that have been disturbed or burned from a wildfire are predominantly cheatgrass or seeded desirable plant species. High densities of Class B roads crisscross the area. The BLM administered areas are utilized by grazing cattle for a portion of the year.

3.3 Resources/Issues Brought Forward for Analysis

3.3.1 Air Quality

Air quality is affected by various natural and anthropogenic factors. Industrial sources such as power plants, mines, and oil and gas extraction activities within Utah contribute to local and regional air pollution. Urbanization and tourism create emissions that affect air quality over a wide area. Air pollutants generated by motor vehicles include tailpipe emissions and dust from travel over dry, unpaved road surfaces. Strong winds can generate substantial amounts of windblown dust.

Air pollution emissions are characterized as point, area, or mobile. Point sources are large, stationary facilities such as power plants and manufacturing facilities and are accounted for on a facility by facility basis. Area sources are smaller stationary sources and, due to their greater number, are accounted for by classes. Production emissions from an oil and gas well and dust from construction of a well pad would be considered area source emissions. Mobile sources consist of non-stationary sources such as cars and trucks. Mobile emissions are further divided into on-road and off-road sources. Engine exhaust from truck traffic to and from oil and gas locations would be considered on-road mobile emissions. Engine exhaust from drilling operations would be considered off road mobile emissions.

The Clean Air Act required the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Utah Division of Air Quality (UDAQ) is responsible to ensure compliance with the NAAQS within the state of Utah.

Table 3.1 NAAQS for the EPA designated criteria pollutants (EPA 2008).

Pollutant [final rule cite]		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide [76 FR 54294, Aug 31, 2011]		primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Lead [73 FR 66964, Nov 12, 2008]		primary and secondary	Rolling 3 month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]		primary	1-hour	100 ppb	98th percentile, averaged over 3 years
		primary and secondary	Annual	53 ppb (2)	Annual Mean
Ozone [73 FR 16436, Mar 27, 2008]		primary and secondary	8-hour	0.075 ppm (3)	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution [71 FR 61144, Oct 17, 2006]	$PM_{2.5}$	primary and secondary	Annual	15 µg/m^3	annual mean, averaged over 3 years
			24-hour	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide [75 FR 35520, Jun 22, 2010] [38 FR 25678, Sept 14, 1973]		primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

as of October 2011

(1) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
(2) The official level of the annual NO2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.
(3) Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. In 1997, EPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard ("anti-backsliding"). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.
(4) Final rule signed June 2, 2010. The 1971 annual and 24-hour SO2 standards were revoked in that same rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

National Ambient Air Quality Standards Criteria Pollutants

Particulate Matter (PM10 AND PM2.5)

Airborne particulate matter consists of tiny coarse-mode (PM10) or fine-mode (PM2.5) particles or aerosols combined with dust, dirt, smoke, and liquid droplets. PM2.5 is derived primarily from the incomplete combustion of fuel sources and secondarily formed aerosols. PM10 is derived primarily from crushing, grinding, or abrasion of surfaces. Sources of particulate matter include industrial processes, power plants, mobile sources (vehicle exhaust and road dust), construction activities, home heating, and fires. Particulate matter causes a variety of health and environmental impacts. Many scientific studies have linked breathing particulate matter to serious health problems, including aggravated asthma, increased respiratory symptoms (e.g., coughing), difficult or painful breathing, chronic bronchitis, decreased lung function, and premature death. Particulate matter is the major cause of reduced visibility. It can stain and damage stone and other materials, including culturally important objects, such as monuments and statues.

Ozone

Ground-level ozone is a secondary pollutant. It is formed by a chemical reaction between nitrogen oxides (NOx) and volatile organic compounds (VOCs) in the presence of sunlight (photochemical oxidation). Precursor sources of NOx and VOCs include motor vehicle exhaust, industrial emissions, gasoline vapors, vegetation emissions (i.e., terpenes), wood burning, and chemical solvents. The abundant sunlight during the summer months drives the photochemical process and creates ground-level ozone; therefore, ozone is generally considered a summertime air pollutant.

Ozone is a regional air quality issue because, along with its precursors, it can transport hundreds of miles from its origins, and maximum ozone levels can occur at locations many miles downwind from the sources. Primary health effects from ozone exposure range from breathing difficulty to permanent lung damage. Significant ground-level ozone also contributes to plant and ecosystem damage.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas emitted from combustion processes. Nationally and, particularly in urban areas, the majority of CO emissions to ambient air come from mobile sources. CO can cause harmful health effects by reducing oxygen delivery to the body's organs (like the heart and brain) and tissues.

Nitrogen Oxides

Nitrogen dioxide (NO2) is one of a group of highly reactive gasses known as "oxides of nitrogen," or "nitrogen oxides (NOx)." Other nitrogen oxides include nitrous acid and nitric acid. While EPA’s National Ambient Air Quality Standard covers this entire group of NOx, NO2 is the component of greatest interest and the indicator for the larger group of nitrogen oxides. NO2 forms quickly from emissions from cars, trucks and buses, power plants, and off-road equipment. In addition to contributing to the formation of ground-level ozone, and fine particle pollution, NO2 is linked with a number of adverse effects on the respiratory system.

Lead

Lead (Pb) is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been from fuels in on-road motor vehicles (such as cars and trucks) and industrial sources. As a result of EPA's regulatory efforts to remove lead from on-road motor vehicle gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions to the air today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline.

Sulfur Dioxide

Sulfur dioxide (SO2) is one of a group of highly reactive gasses known as “oxides of sulfur.” The largest sources of SO2 emissions are from fossil fuel combustion at power plants (73%) and other industrial facilities (20%). Smaller sources of SO2 emissions include industrial processes such as extracting metal from ore, and the burning of high sulfur containing fuels by locomotives, large ships, and non-road equipment. SO2 is linked with a number of adverse effects on the respiratory system.

Prevention of Significant Deterioration

Under the Prevention of Significant Deterioration (PSD) provisions of the Clean Air Act (CAA), incremental increases of specific pollutant concentrations are limited above a legally defined baseline level. Many national parks and wilderness areas are designated as PSD Class I. The PSD program protects air quality within Class I areas by allowing only slight incremental increases in pollutant concentrations. Areas of Utah not designated as PSD Class I are classified as Class II. For Class II areas, greater incremental increases in ambient pollutant concentrations are allowed as a result of controlled growth.

Air Quality Related Values

Air Quality Related Values (AQRVs) are resources applied to all PSD Class I and sensitive Class II areas that may be affected by changes in air quality. AQRVs include visibility, dark night skies, vegetation, wildlife, and soils. Visibility is the most sensitive AQRV in the parks. Visibility is impaired by haze caused by tiny particles that scatter and absorb light. Sulfates, crustal materials, organic carbon, elemental carbon, and nitrates, in order of decreasing contributions, comprise particles that result in the formation of haze in the western U.S. Sulfates and crustal materials are responsible for over 50 percent of the causes of visibility impairment. Sulfate particles are formed from sulfur dioxide gas released from coal-burning power plants and other industrial sources. Crustal materials are windborne dust particles from dirt roads and other open spaces. The EPA's Regional Haze regulations required states to establish goals for each Class I air quality area to improve visibility on the haziest days and ensure no degradation occurs on the clearest days. The 2008 Government Performance and Results Act (GPRA) set goals for air quality for parks on the northern Colorado Plateau, including Canyonlands and Arches NPs. While an AQRV reflects a land management agency's policy and is not a legally enforceable standard, federal regulations such as the EPA's Regional Haze rule and GPRA ensure the protection of some AQRVs.

Some aspects of air quality are monitored for Canyonlands and Arches NPs. Long-term visibility monitoring in Canyonlands NP determined that on the clearest and haziest days, this park exhibited a statistically significant improving trend (National Park Service [NPS], 2010a). During the 20 percent clearest days at Canyonlands NP, or when visibility is very good, atmospheric sulfates were identified as the largest contributor to impaired visibility; however, during the 20 percent haziest days, or when visibility is impaired, coarse particulate matter is the largest contributor to haze (Perkins, 2010). Increasing ozone concentrations also correspond to decreasing visibility (Aneja et al., 2004). Monitored ozone concentrations in Canyonlands NP were assessed as "moderate," but trend data are not available. Between 1993 and 2008, ozone levels in Canyonlands NP have generally remained under, but close to, the standard. In 2012, one ozone exceedance was measured in May and one in June. The 4th highest maximum 8-hour measurement to-date in 2012 was 72 parts per billion (NPS, 2012). Visibility at Arches NP was assessed as moderate, showing no trend. Ozone levels are not monitored at Arches NP. The National Park Service Air Resources Division expects air quality in both parks to improve as regulations that reduce tailpipe emissions from motor vehicles and pollution from electric-generating facilities take full effect over the next few years (NPS, 2010).

Soils and vegetation in the parks may be sensitive to nutrient enrichment from deposition of atmospheric nitrates and sulfates, which contribute to soil and water acidification. Fertilizer use, motor vehicles, and agricultural activities produce ammonia, which contribute to nitrogen

deposition. Ammonia can be emitted from light duty vehicles, depending on fuel types and operational condition. Ammonium results primarily from crop and livestock production (NPS, 2006a). Increased nitrogen loading levels from deposition of ammonium has been observed at Canyonlands NP (NPS, 2010a); however, surface waters and soils in Canyonlands and Arches NPs, with the exception of potholes, are generally well-buffered and are not likely to be acidified by atmospheric deposition (NPS, 2006).

Table 3.2 Air Quality and AQRV Trends in Nearby National Parks

National Park	Visibility	Nitrogen Deposition	Sulfur Deposition	Ozone
Arches NP	Moderate condition, no trend.	No data.	No data.	No data.
Canyonlands NP	Moderate condition, no trend.	Good; no trend.	Good; no trend.	Moderate condition, no trend.

Source: NPS, 2010a

Hazardous Air Pollutants

Hazardous air pollutants (HAPs) are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental impacts. The EPA has classified 187 air pollutants as HAPs. Examples of listed HAPs associated with the oil and gas industry include formaldehyde, benzene, toluene, ethylbenzene, isomers of xylene (BTEX) compounds, and normal-hexane (n-hexane).

The CAA requires the EPA to regulate emissions of toxic air pollutants from a published list of industrial sources referred to as "source categories." The EPA has developed a list of source categories that must meet control technology requirements for these toxic air pollutants. Under Section 112(d) of the CAA, the EPA is required to develop regulations establishing national emission standards for hazardous air pollutants (NESHAP) for all industries that emit one or more of the pollutants in major source quantities. These standards are established to reflect the maximum degree of reduction in HAP emissions through application of maximum achievable control technology (MACT). Source categories for which MACT standards have been implemented include oil and natural gas production and natural gas transmission and storage.

There are no applicable federal or State of Utah ambient air quality standards for assessing potential HAP impacts to human health, and monitored background concentrations are rarely available. Therefore, reference concentrations (RfC) for chronic inhalation exposures and reference exposure levels (REL) for acute inhalation exposures are applied as significance criteria. The table below provides the RfCs and RELs. RfCs represent an estimate of the continuous (i.e., annual average) inhalation exposure rate to the human population (including sensitive subgroups such as children and the elderly) without an appreciable risk of harmful effects. The RELs represent the acute (i.e., 1-hour average) concentration at or below which no adverse health effects are expected. Both the RfC and REL guideline values are for non-cancer effects.

Greenhouse Gases (GHGs)

The Council on Environmental Quality (CEQ) has released new (2010) draft guidance on how the National Environmental Policy Act (NEPA) should consider and evaluate greenhouse gas (GHG) emissions and climate change. The draft guidance outlines how federal agencies should consider climate change issues under NEPA. Under this draft guidance, where a proposed federal action would be reasonably anticipated to emit greenhouse gases into the atmosphere in quantities that the agency preparing the NEPA document finds may be "meaningful," the agency should quantify and disclose its estimate of the expected, annual direct and indirect greenhouse gas emissions. Specifically, where a proposed action is anticipated to cause direct, annual emissions of 25,000 metric tons or more of carbon dioxide (CO2)-equivalent greenhouse gas emissions, a quantitative and qualitative assessment is required together with the consideration of mitigation measures and reasonable alternatives to reduce greenhouse gas emissions.

Several factors affect climate change, including but not limited to GHGs, land use management practices, and the albedo effect. GHGs are produced and emitted by various sources during phases of oil and gas exploration, well development, and production. The primary sources of GHGs associated with oil and gas exploration and production are CO2, nitrous oxide (N2O), and methane (CH4). In addition, VOCs are a typical source of emissions associated with oil and gas exploration and production. Under specific environmental conditions, N2O and VOCs form ozone, which also is considered a GHG.

On October 30, 2009, the EPA issued the final mandatory reporting rule for major sources of GHG emissions. The rule requires a wide range of sources and source groups to record and report selected GHG emissions, including CO2, CH4, N2O, and some halogenated compounds.

The EPA delayed a comparable rule for GHG emissions for various natural gas industry groups. On December 31, 2010, a rule (Subpart W) became effective that addressed natural gas systems and natural gas transmission source groups, among other things.

The final rule (Subpart W) for natural gas systems specifically identified monitoring and reporting requirements for oil and natural gas systems. The oil and natural gas source category includes on-shore natural gas processing facilities and on-shore natural gas transmission compression facilities, which are applicable components of the proposed project. Combustion units associated with these processes also are included as part of the separate final rule. The EPA final rule concerning mandatory reporting of GHGs do not require any controls or establish any standards related to GHG emissions or impacts. Additionally, in June of 2010, the EPA finalized the Greenhouse Gas Tailoring Rule. The rule outlines the time frame and the applicability criteria that determine which stationary sources and modification projects become subject to permitting requirements for GHG emissions under the CAA's PSD and Title V programs.

Global mean surface temperatures increased nearly 1.8°F from 1890 to 2006. Models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Northern latitudes (above 24°N) have exhibited temperature increases of nearly 2.1°F since 1900, with a nearly 1.8°F increase since 1970. Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of GHGs are likely to accelerate the rate of climate change.

Ongoing scientific research has identified the potential impacts of anthropogenic (manmade) GHG emissions and changes in biological carbon sequestration due to land management activities for a global climate. Through complex interactions on a regional and global scale, these GHG emissions and net losses of biological carbon sinks cause a net warming effect of the atmosphere, primarily by decreasing the amount of heat energy radiated by the earth back into space. Although GHG levels have varied for millennia, recent industrialization and burning of fossil carbon sources have caused CO2(e) concentrations to increase dramatically, and are likely to contribute to overall global climatic changes.

The IPCC (Intergovernmental Panel on Climate Change) recently concluded that warming of the climate system is unequivocal, and most of the observed increase in globally average temperatures since the mid twentieth century is very likely due to the observed increase in anthropogenic GHG concentrations (IPCC 2007).

In 2001, the IPCC projected that by the year 2100, global average surface temperatures could increase by 2.5°F to 10.4°F above 1990 levels. The National Academy of Sciences (2010) has confirmed these projections, but also has indicated that there are uncertainties regarding how climate change may affect different regions. Computer model predictions indicate that increases in temperature would not be equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures are more likely than increases in daily maximum temperatures. Although large-scale spatial shifts in precipitation distribution may occur, these changes are more uncertain and difficult to predict.

Written in the IPCC Fourth Assessment Report: Climate Change 2007, an expert assessment based on the combination of available constraints from observations and the strength of known feedbacks simulated in the models used to produce the climate change projections indicates that the equilibrium global mean surface air temperature (SAT) warming for a doubling of atmospheric carbon dioxide (CO2), or 'equilibrium climate sensitivity', is likely to lie in the range 2°C to 4.5°C, with a most likely value of about 3°C. Equilibrium climate sensitivity is very likely larger than 1.5°C. For fundamental physical reasons, as well as data limitations, values substantially higher than 4.5°C still cannot be excluded, but agreement with observations and proxy data is generally worse for those high values than for values in the 2°C to 4.5°C range. The 'transient climate response' (TCR, defined as the globally averaged SAT change at the time of CO2 doubling in the 1% yr–1transient CO2 increase experiment) is better constrained than equilibrium climate sensitivity. The TCR is very likely larger than 1°C and very unlikely greater than 3°C based on climate models, in agreement with constraints from the observed surface warming. (http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch10s10-es-1-mean-temperature.html)

The analysis of the Regional Climate Impacts prepared by the United States Global Change Research Program (USGCRP) (2009) suggests that recent warming in the region was among the most rapid nationally. They conclude that this warming is causing decline in spring snowpack and reducing flow in the Colorado River. Their projections of future climate change indicate that further strong warming will reduce precipitation, which in turn will strain regional water supplies, increase the risk of wildfires and invasive species, and degrade recreational opportunities.

Past records and future projections predict an overall increase in regional temperatures, which would cover the development area. As has been observed at many sites to date, the observed increase is largely the result of the warmer nights, and effectively higher average daily minimum temperatures at many of the sites in the region. The USGCRP (2009) projects a region-wide decrease in precipitation, although with substantial variability in inter-annual conditions. For eastern Utah, the projections range from an approximately 5% decrease in annual precipitation to decreases as high as 40% of annual precipitation.

As with any field of scientific study, there are uncertainties associated with the science of climate change; however, this does not imply that scientists do not have confidence in many aspects of climate change science. Some aspects of the science are known with virtual certainty because they are based on well-known physical laws and documented trends.

3.3.2 Socio-Economics

Sanpete County has a rural, agricultural-based economy. The US Census Bureau shows Sanpete County's population is 27,822 (based on the 2010 census). The population is mostly dispersed into small communities. Manti, the county seat, has a population of approximately 3,276 (2010 census), and Ephraim is the largest town in the county with a population of 6,135 people. The county's economy is currently based on livestock, manufacturing, and trade.

Sevier County has a rural, agricultural-based economy. The Richfield Area Chamber of Commerce shows Sevier County's population is 20,802 (based on the 2010 census). The population is mostly dispersed into small communities. Richfield, the county seat, has a population of 7,551 (2010 census) and is the largest town in the county. The county's economy is currently based on livestock, coal production, oil production, manufacturing, and trade.

4.0 ENVIRONMENTAL IMPACTS

4.1 Introduction

This chapter discusses the environmental consequences of implementing the alternatives described in Chapter 2. Under NEPA, actions with the potential to affect the quality of the human environment must be disclosed and analyzed in terms of direct and indirect effects—whether beneficial or adverse and short or long term—as well as cumulative effects. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by an action but occur later or farther away from the resource. Beneficial effects are those that involve a positive change in the condition or appearance of a resource or a change that moves the resource toward a desired condition. Adverse effects involve a change that moves the resource away from a desired condition or detracts from its appearance or condition. Cumulative effects are the effects on the environment that result from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions.

The No Action alternative (offer none of the nominated parcels for sale), serves as a baseline against which to evaluate the environmental consequences of the Proposed Action alternative (offer fifty-four of the parcels for sale with additional resource protective measures). For each alternative, the environmental effects are analyzed for the resources that were carried forward for analysis in Chapter 3.

4.2 Direct and Indirect Impacts

4.2.1 Alternative A – Proposed Action

This section analyzes the impacts of the proposed action to those potentially impacted resources described in the Affected Environment (Chapter 3).

4.2.1.1 Air Quality

The act of leasing would not result in changes to air quality. However, should the leases be issued, development of those leases could impact air quality conditions. It is not possible to accurately estimate potential air quality impacts by computer modeling from the project due to the variation in emission control technologies as well as construction, drilling, and production technologies applicable to oil versus gas production and utilized by various operators, so this discussion remains qualitative.

Prior to authorizing specific proposed projects on the subject lease parcels quantitative computer modeling using project specific emission factors and planned development parameters (including specific emission source locations) may be conducted to adequately analyze direct and indirect potential air quality impacts. In conducting subsequent project specific analysis BLM will follow the policy and procedures of the National Interagency MOU Regarding Air Quality Analysis and Mitigation for Federal Oil and Gas Decisions through NEPA, and the FLAG 2010 air quality guidance document. Air quality dispersion modeling which may be required includes impact analysis for demonstrating compliance with the NAAQS, plus analysis of impacts to Air Quality Related Values (i.e. deposition, visibility), particularly as they might affect regional Class 1 areas (national parks and wilderness areas).

An oil or gas well, including the act of drilling, is considered to be a minor source under the Clean Air Act. Minor sources are not controlled by regulatory agencies responsible for implementing the Clean Air Act. In addition, control technology is not required by regulatory

agencies at this point, since the parcels occur in NAAQS attainment areas. Different emission sources would result from the two site specific lease development phases: well development and well production. The BLM does look to mitigate pollutants via lease stipulations and further NEPA actions throughout the lease process.

Well development includes emissions from earth-moving equipment, vehicle traffic, drilling, and completion activities. NOX, SO2, and CO would be emitted from vehicle tailpipes. Fugitive dust concentrations would increase with additional vehicle traffic on unpaved roads and from wind erosion in areas of soil disturbance. Drill rig and fracturing engine operations would result mainly in NOX and CO emissions, with lesser amounts of SO2. These temporary emissions would be short-term during the drilling and completion times.

During well production there are continuous emissions from separators, condensate storage tanks, and daily tailpipe and fugitive dust emissions from operations traffic. During the operational phase of the Proposed Action, NOX, CO, VOC, and HAP emissions would result from the long-term operation of condensate storage tank vents, and well pad separators. Additionally, road dust (PM10 and PM2.5) would be produced by vehicles servicing the wells.

Project emissions of ozone precursors, whether generated by construction and drilling operations, or by production operations, would be dispersed and/ or diluted to the extent where any local ozone impacts from the Proposed Action would be indistinguishable from background or cumulative conditions. The primary sources of HAPs are from oil storage tanks and smaller amounts from other production equipment. Small amounts of HAPs are emitted by construction equipment. However, these emissions are estimated to be less than 1 ton per year. Based on the negligible amount of project-specific emissions, the Proposed Action is not likely to violate, or otherwise contribute to any violation of any applicable air quality standard, and may only contribute a small amount to any projected future potential exceedance of any applicable air quality standards.

The construction, drilling, completion, testing, and production of an oil and gas well could result in various emissions that affect air quality. Construction activities result in emissions of particulate matter. Well drilling activities result in engine exhaust emissions of NOx, CO, and VOC. Completion and testing of the well result in emissions of VOC, NOX, and CO. Ongoing production results in the emission of NOx, CO, VOC, and particulate matter.

Due to the very small level of anticipated development, an emissions inventory (EI) has not been conducted for this lease sale. A typical oil and gas well EI is estimated for the purpose of this analysis and is based on the following assumptions:

- Each oil and gas well would cause 12 acres of surface disturbance. This acreage includes access.
- Construction activity for each well is assumed to be 10 days. It is further assumed that, based on the acreage disturbed, 4.5 days would be spent in well pad construction and 5.5 days would be spent in road and pipeline construction.
- Control efficiency of 25% for dust suppression would be achieved as a result of compliance with Utah Air Quality regulation R307-205.
- Post construction particulate matter (dust) emissions are likely to occur on a short term basis due to loss of vegetation within the construction and staging areas. Assuming

appropriate interim reclamation, these emissions are likely to be minimal to negligible and will not be considered in this EA.

- Drilling operations would require 20-60 days.
- Completions and testing operations would require 3 days.
- Off road mobile exhaust emissions from heavy equipment during construction activities and on road mobile emissions would not be considered as they are dispersed, sporadic, temporary, and not likely to cause or contribute to exceedence of the NAAQS.

If exploration occurs, short-term impacts would be stabilized or managed rapidly (within two to five years), and long-term impacts are those that would substantially remain for more than five years. An air quality best management practice (BMP) which discusses the amounts of NOX emission per horse-power hour based on internal combustion engine size, would be attached to all parcels. Stipulation UT-S-101, Air Quality, would consist of the following provisions:

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 grams of NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NOx per horsepower-hour.

Emission factors for activities of the proposed action were based on information contained in the EPA's Emission Factors & AP 42, Volume I, Fifth Edition (EPA.1995), available at: http://www.epa.gov/ttn/chief/ap42/index.html.

The production emissions from oil storage tanks was estimated based on the emission factor contained in the Colorado Department of Public Health and Environment PS Memo 05-01, Oil & Gas Atmospheric Condensate Storage Tank Batteries Regulatory Definitions and Permitting Guidance (CDPHE 2009), available at: http://www.cdphe.state.co.us/ap/down/ps05-01.pdf.

Table 4.1 Emissions Estimate

	Construction Emissions (Tons)	Drilling Emissions (Tons)			Completions Emissions (Tons)				Ongoing Production Emissions (Tons/year)			
	PM_{10}	NO_X	CO	VOC	VOC	NO_X	CO	PM_{10}	NO_X	CO	VOC	PM_{10}
Typical Well	0.34	13.31	1.83	0.23	0.85	0.07	0.07	0.00	0.01	0.01	6.44	0.00000
Sub Total	0.34	13.31	1.83	0.23	0.85	0.07	0.07	0.00	0.01	0.01	6.44	0.00000
					PM_{10}	NO_X	CO	VOC				
Activity Emissions (Total emissions for drilling and completion the well)					0.34	13.37	1.89	1.08	Tons			
Production Emissions (Ongoing annual emissions for the well)					0.00000	0.01	0.01	6.44	tpy			

Based on the emissions estimates contained in Table 4.1, and considering the location of the proposed leasing relative to population centers and Class 1 areas, substantial air resource impacts are not anticipated as a result of this leasing action, and no further analysis or modeling is warranted. Emissions resulting from the lease sale are not likely to result in major impacts to air quality nor are they likely to cause a violation of the NAAQS.

Additional air quality control measures may be warranted and imposed at the APD stage. These control measures are dependent on future regional modeling studies, other analysis or changes in regulatory standards. As such, a lease notice would be appropriate to inform an operator or the general public that additional air quality control measures would be pursued. Lease notices UT-LN-99 (Regional Ozone Formation Controls) and UT-LN-102 (Air Quality Analysis) would be attached to all lease parcels.

To address oil and gas development emissions may have on regional ozone formation, the following Best Management Practices (BMPs) would be required through a lease notice (UT-LN-99, Regional Ozone Formation Controls) for any development projects related to this lease sale:

- Tier II or better drilling rig engines
- Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines <300HP and 1g NOx/bhp-hr for engines >300HP
- Low bleed or no bleed pneumatic pump valves
- Dehydrator VOC emission controls to +95% efficiency
- Tank VOC emission controls to +95% efficiency

4.2.1.2 Socio-Economics

The social and economic environments of Sanpete and Sevier Counties would be positively affected by the proposed project. Exploratory drilling of oil and gas in the project area would contribute to the local economy by providing several benefits: short-term employment opportunities for construction, drilling and completion; monies to local contractors; and revenues recycled into the area's local economy. Additional revenues would be generated in the form of sales taxes and income taxes. Local workers would potentially be used in much of the project work, and they would likely spend much of their income in local economies, thus producing a "multiplier effect" that could be at least 1.5 times the revenues generated from the proposed project.

The Proposed Action would add to the short-term opportunities for employment in Sanpete and Sevier Counties, especially for workers associated with the support of the oil and gas industry. The average cost to construct, drill and complete an individual well is approximately $5,000,000, if fifty-four wells were drilled the economic impact would be approximately $270,000,000.

If the proposed well is productive, long-term employment opportunities would likely be generated for at least one pumper and three tanker truck drivers. If the well is productive, income to the federal government, State of Utah and Sanpete and Sevier Counties would be generated in the form of royalties, sales taxes, income taxes, and property taxes for the producing well. Furthermore, if the well is productive, field development would likely be pursued by the

applicant, thereby potentially resulting in additional short-term and long-term employment opportunities, royalties, sales taxes, income taxes, and property taxes.

If production is established from a well and/or additional wells, the development of oil and gas could lead to long-term impacts to the social structure of the communities, changes in the economic base, and an increased demand for local government services. These impacts could include increased revenues in the local economy, an increase in the tax base, change in the social structure of the local community, and increased demand for community services and strain on the infrastructure (schools, hospitals, law enforcement, fire protection, and other community needs. These possible social and economic changes are beyond the scope of this document and to make those projections would be speculative at best.

4.2.1.3 Design Features

Application of stipulations and lease notices (including those identified in Appendix A and C) to each of the parcels would be adequate for the leasing stage to disclose potential future restrictions and to facilitate the reduction of potential impacts upon receipt of a site specific APD.

4.2.2 Alternative B – No Action

This alternative (not to offer any of the nominated parcels for sale) may not meet the need for the proposed action.

4.2.2.1 Air Quality

The No Action alternative would prevent future potential impacts relating to lease operations. Although drilling and production activities on federal land surfaces are restricted to leased parcels, oil and gas exploration may also be authorized on unleased public lands, on a case-by-case basis, pursuant to 43 CFR 3150.0-1. Accordingly, this alternative would not prevent direct, indirect or cumulative environmental impacts relating to oil and gas exploration activities through denial of the proposed action. Additionally, this alternative would not prevent indirect impacts relating to rights of way authorizations to support oil and gas operations on adjacent leased parcels.

4.2.2.2 Socio-Economics

Under the No Action alternative, potential short-term beneficial impacts of increased employment and income and revenues generated from construction, drilling and completion of the wells would not be realized, nor would there be a demand for other oil and gas related services since wells would not be drilled. Not drilling the wells would reduce the likelihood of finding oil and gas resources. Local economies would not realize any added incomes.

4.3 Cumulative Impacts Analysis

A cumulative impact is defined in Council on Environmental Quality (CEQ) regulations (40 CFR §1508.7) as "the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." Cumulative impacts can result from individually minor but collectively major actions taking place over a period of time. Past and present actions and reasonably foreseeable future actions with the potential to contribute to cumulative effects are discussed below followed by an analysis of cumulative effects. All resource values addressed in Chapter 3 have been evaluated for

cumulative effects. If, through the implementation of mitigation measures or project design features, no net effect to a particular resource results from an action, then no cumulative effects result.

Reasonably Foreseeable Action Scenario (RFAS)

The Cumulative Impact Analysis Area (CIAA) for air quality is Sanpete and Sevier Counties. Based on the relatively minor levels of emissions associated with this proposed development, and the application of BMPs and lease notices, it is unlikely emissions from any subsequent development of the proposed leases would contribute to regional ozone formation in the project area, nor is it likely to contribute or cause exceedences of any NAAQS.

A variety of activities, such as sightseeing, biking, camping, and hunting, have occurred and are likely to continue to occur near or within some or all of the nominated parcels; these activities likely result in positive impacts to the socio-economics of Sanpete and Sevier Counties. Other activities, such as farming, livestock grazing, vegetation projects, and wildland fire, have also occurred within some or all of the nominated parcels and are likely to occur in the future. These types of activities are likely to have a greater impact on resources in the project area because of their more concentrated nature. Because these activities are occurring within the nominated parcel boundaries, they have the potential to contribute to cumulative effects.

The cumulative impacts as described in the Richfield RMP/FEIS are incorporated by reference to Chapter 4. The past, present, and foreseeable future actions with the potential to contribute to surface disturbance include development of new and existing mineral rights or realty actions (for example, pipeline or road rights of way) or the continuation of agricultural & recreational activities.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

Public and agency involvement has occurred as described in sections 5.2 and 5.3 below.

5.2 Persons, Groups, and Agencies Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
U.S. Fish & Wildlife Service	Section 7 ESA	A letter was sent to the USFWS on August 7, 2013 which provided the preliminary list and notified them of the May 2014 lease sale. Coordination with USFWS for the May 2014 lease sale is ongoing. Formal consultation was completed as part of the RMP/ROD in the form of the Biological Opinion. Threatened and endangered species are not present on the subject parcels.
Utah State Historic Preservation Office	Section 106 NHPA	A consultation request letter was sent on November 15, 2013 with a determination of no adverse effect. USHPO concurred with this finding on December 11, 2013.
State of Utah's Public Lands Policy Coordination Office	Coordinated with as leasing program partner.	A letter was sent on August 7, 2013 which provided the preliminary list and notified them of the May 2014 lease sale. A letter was received on December 5, 2013 primarily detailing specific concerns raised by the Utah Division of Wildlife Resources.
Utah Division of Wildlife Resources	Agency with expertise.	On August 2, 2013, an e-mail with GIS data depicting the proposed May 2014 lease sale parcels was sent to UDWR and on August 7, 2013, a letter was sent to UDWR as further notification regarding the May 2014 lease sale. A response was received from UDWR on October 28, 2013 identifying opportunity areas for sage grouse. Additional information was received in the letter from State of Utah's Public Lands Policy Coordination Office on December 5, 2013.
National Park Service, Salt Lake City Office	Coordinated with as leasing program partner.	A letter was sent on August 7, 2013 which provided the preliminary list and notified them of the May 2014 lease sale. GIS data depicting the proposed May 2014 lease parcels were sent to the National Park Service for review and comment on August 16, 2013 (preliminary list) and December 20, 2013 (Draft EA parcels).
U.S. Forest Service, Intermountain Region	Coordinated with as leasing program partner.	A letter was sent on August 7, 2013 which provided the preliminary list and notified them of the May 2014 lease sale.
Utah School and Institutional Trust Lands Administration	Coordinated with as leasing program partner.	A letter was sent on August 7, 2013 which provided the preliminary list and notified them of the May 2014 lease sale.

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Paiute Indian Tribe of Utah Ute Indian Tribe Hopi Tribe Navajo Nation Utah Navajo Commission Southern Ute Tribe Ute Mountain Ute Kaibab Paiute Tribe Moapa Band of Paiute Indians Zuni Tribe	American Indian Religious Freedom Act (1978) NHPA	Consultation request letters were sent on November 7, 2013. Visits were made to the Navajo Nation and the Hopi Tribe in November 2013. A letter was received from the Hopi Tribe on December 3, 2013. Letter sent to Hopi Tribe January 14, 2014, and email response back was received on January 27, 2014.
Sanpete County Commissioners	Coordination	Proposed project was discussed at a County Commissioners meeting on November 5, 2013. Commissioners are in favor of leasing parcels and oil and gas development.
Split Estate Owners	Coordination	A letter was sent to surface land owners on September 24, 2013 notifying them of the May 2014 sale and inviting them to participate in the parcel site visit. None of these parties participated in the site visits. Several parties have contacted the RFO requesting additional information and to express concerns about potential damage to their property and to private water sources if drilling was permitted.

5.3 Summary of Public Participation

In order to meet the intent of the CEQ regulations that require an "early and open process for determining the scope of issues to be addressed and for identifying significant issues related to a Proposed Action" (40 CFR 1501.7) several actions were taken to involve the public.

On October 25, 2013, the public was notified of the proposed action by posting on the Utah BLM ENBB (https://www.blm.gov/ut/enbb). The process used to involve the public also includes a 30-day public review and comment period for the EA and unsigned FONSI offered from December 20, 2013 to January 27, 2014.

The BLM also refers to the public involvement processes utilized in developing the RFO and SGFO RODs/RMPs.

All the information related to this EA is maintained on the identified websites (ENBB and Oil and Gas Leasing).

BLM utilized and coordinated the NEPA public participation requirements to assist the agency in satisfying the public involvement requirements under Section 106 of the National Historic Preservation Act (NHPA) (16 U.S.C. 470(f) pursuant to 36 CFR 800.2(d)(3). The information about historic and cultural resources within the area potentially affected by the proposed project/action/approval will assist the BLM in identifying and evaluating impacts to such resources in the context of both NEPA and Section 106 of the NHPA. BLM consulted with Indian tribes on a government-to-government basis in accordance with Executive Order 13175 and other policies. Tribal concerns, including impacts on Indian trust assets and potential impacts to cultural resources, were given due consideration. Federal, State, and local agencies, along with

tribes and other stakeholders that may be interested in or affected by the proposed project/action/approval were invited to participate in the scoping process.

5.3.1 Modifications Based on Public Comment and Internal Review

An internal review identified necessary corrections or clarifications to this EA. These modifications include:

1. Corrections to grammar, sentence structure, and formatting were made throughout the EA. In general, these changes were made without further clarification. Examples include: updates to the Table of Contents, changes in font size, changes in verb tense and style or insertion of footnotes.
2. Old Woman ACEC was changed to Old Woman Front ACEC.
3. Section 5.2 Persons, Groups or Agencies Consulted. White Mesa Ute, Northwest Band of Shoshone Tribe, Fallon Paiute – Shoshone Tribe, San Juan Southern Paiute were removed and Zuni Tribe added.
4. Sections 1.1 and 3.2. The total acreage proposed to be leased was changed from 87,630.47 to 67,555.92.
5. Section 1.7. The Draft Environmental Impact Statement and Draft Resource Management Plan was added to the list of documents. Additional information was added regarding documents that are incorporation by reference.
6. The number of parcels proposed to be leased was reduced to 54 due to additional parcels being deferred (see Appendix D).
7. Section 2.2. Total acres disturbed analyzed in EA reduced from 744 to 648 acres.
8. Section 5.2 was updated.
9. Reference to IM UT2010-055 has been removed from the EA (Section 1.6 and ID Team Checklist).
10. Lease notice UT-LN-91 was added to parcels 003, 005, 006, 011, 012, 013, 023, 035 and 053. The Id Team Checklist for Water resources was changed to reflect this addition.
11. Lease Notice T&E-14 was changed to stipulation UT-S-310 on parcels 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 132, 133, 135 & 136, and in the ID Team Checklist.
12. Stipulation UT-S-221 has been added to parcels 132 and 135 and in the ID Team Checklist.
13. Page 4 of EA changed to 43 CFR 3101.1-2 states: " A lessee shall have the right to use as much of the leased lands as is necessary to explore for, drill for, mine, extract, remove and dispose of all the leased resources in leasehold subject to: Stipulations attached to the lease; restrictions deriving from specific, non-discretionary statutes; and such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations."
14. Lease Notice UT-LN-72 added to parcels 003, 004, 005, 006, 015, 016 and 053. ID Team Checklist for Paleontology updated.
15. Section 4.2.1.2 updated.
16. Socioeconomics section of ID Team Checklist "and logging crews" deleted.
17. Floodplains section of ID Team Checklist updated.

18. Non-WSA Lands with Wilderness Characteristics section of the ID Team Checklist has been updated.

5.3.2 Response to Public Comment

A 30-day public review and comment period for the EA and unsigned FONSI was offered from September 21, 2012 to October 19, 2012. BLM received eight (8) comment letters from individuals and organizations as follows:

- Terence Parker Haley
- Roseann Dudrick
- Kristen Hughes
- Ian Wade
- Dain Leroy Christensen
- WildEarth Guardians, Wild Utah Project and Rocky Mountain Wild
- Utah Rock Art Research Association
- Southern Utah Wilderness Alliance and Natural Resources Defense Council

The BLM acknowledges the support and concerns expressed by the public regarding the leasing of oil and gas resources on the public lands within the Richfield Field Office, including the subject lease parcels.

Information within the comments that is background or general in nature was reviewed; however, responses to or clarifications made to the EA from these items are not necessary. Likewise, expressions of position or opinion are acknowledged but do not cause a change in the analysis. As identified in the NEPA Handbook (H-1790-1, section 6.9.2.2 comment response), BLM looked for modifications to the alternatives and the analysis as well as factual corrections while reviewing public comments.

Of the letters received, comments were focused primarily on air quality studies, wildlife, wilderness characteristics, development, visual resources, water quality, prehistoric rock art and other cultural resources. Many of the issues raised were addressed in the EA. Section 5.3.1 Modifications Based on Public Comments and Internal Review identifies changes to this EA that were made as a result of public comments. Public comments and BLM responses are addressed in Appendix E.

5.4 List of Preparers

Name[4]	Title	Responsible for the Following Section(s) of this Document
Stan Andersen	Supervisory Natural Resource Specialist	Team Lead, Environmental Justice, and Socio-Economics
Leonard Herr	Physical Scientist	Air Quality, and Greenhouse Gas Emissions/Climate Change
Colin Schwartz	Physical Science Tech.	Air Quality and Climate Change
Phil Zieg	Hydrologist	Water Resources/Water Quality/Water Rights
Jennifer Evans	Outdoor Recreation Specialist	ACEC's, BLM Natural Areas, Recreation, Visual Resources, Wild and Scenic Rivers, and Wilderness/WSA
Jared Lundell	Archeologist	Cultural Resources and Native American Religious Concerns
Brant Hallows	Soil Scientist	Floodplains, Farmlands (Prime or Unique), and Soils/Watershed
Larry Greenwood	Wildlife Biologist	Fish and Wildlife, Migratory Birds, Utah Sensitive Plant and Animal Species other than FWS Candidate or Listed Species, Vegetation, Wetlands/Riparian Zones, and Threatened, Endangered, or Candidate Animal Species, and Threatened, Endangered, or Candidate Plant Species
Bob Bate	Fuels Specialist	Fuels/Fire Management and Woodland/Forestry
Joe Manning	Geologist	Geology/Mineral Resources/Energy Production, and Paleontology
Mike Utley	Realty Specialist	Lands/Access
Burke Williams	Range Specialist	Invasive Species/Non-Native Species (Noxious Weeds), Livestock Grazing/Range, Rangeland Health Standards and Guidelines
Randy Peterson	Safety Coordinator	Wastes (Hazardous or Solid)
Chris Colton	Range Specialist	Wild Horse and Burros

[4] Refer also to the Interdisciplinary Team Checklist (Appendix C).

6.0 REFERENCES, ACRONYMS AND APPENDICES

6.1 References Cited

BLM. 1999. St. George Field Office Record of Decision and Approved Resource Management Plan. St. George Field Office, Utah, 1999.

BLM. 2008. Richfield Field Office Record of Decision and Approved Resource Management Plan. Richfield Field Office, Utah, October 2008.

Logan Simpson Design Inc. (2011), Richfield Field Office Visual Resource Inventory, Department of the Interior, Bureau of Land Management, Utah State Office, Salt Lake City, Utah.

Parrish, J. R., F. P. Howe, and R. Norvell. 2002. The Utah avian conservation strategy, version 2.0. Salt Lake City, UT: Utah Partners in Flight Program, Utah Division of Wildlife Resources.

Utah Division of Air Quality, 2011, Annual Report for the Year 2011, Salt Lake City, Utah, 38 pp.

UDWR. 2013. Conservation Plan for Sage-grouse in Utah.

US Department of Interior and US Department of Agriculture. 2007. Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development. 84 pp.

6.2 List of Acronyms

ACEC	Areas of Critical Environmental Concern
APD	Application for Permit to Drill
BLM	Bureau of Land Management
BMP	Best Management Practice
BCR	Bird Conservation Region
CFR	Code of Federal Regulations
CIA	Cumulative Impact Area
CSU	Controlled Surface Use
CWCS	Comprehensive Wildlife Conservation Strategy
DR	Decision Record
EA	Environmental Assessment
EIS	Environmental Impact Statement
ENBB	Environmental Notification Bulletin Board
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FLPMA	Federal Land Policy and Management Act of 1976
FONSI	Finding of No Significant Impact
IDPR	Interdisciplinary Parcel Review
IM	Instruction Memorandum
LN	Lease Notice

LUP	Land Use Plan
NCLS	Notice of Competitive Lease Sale
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NSO	No Surface Occupancy
OSHA	Occupational Safety and Health Act
RFAS	Reasonably Foreseeable Action Scenario
RFD	Reasonably Foreseeable Development
RFO	Richfield Field Office
ROD	Record of Decision
ROW	Right-of-Way
SGFO	St. George Field Office
SHPO	State Historic Preservation Office
UDWR	Utah Division of Wildlife Resources
USFWS	United States Fish & Wildlife Service
USC	United States Code
USO	Utah State Office
WO	Washington Office

6.3 List of Appendices

A. Oil and Gas Lease Sale List with Stipulations and Lease Notices
B. Parcel Maps
C. Interdisciplinary Team Checklist
D. Deferred Parcel List
E. Response to Comments

APPENDIX A, OIL AND GAS LEASE SALE LIST

OIL AND GAS LEASE SALE LIST

In addition to the Stipulations listed below, the direction provided in Washington Office Memorandums WO-IM-2005-003 (Cultural Resources Stipulation) and WO-IM-2002-174 (Endangered Species Act Stipulation) should be applied to all parcels.

UT0514-001
T. 20 S., R. 1 W., Salt Lake
Sec. 27: Lots 6-20, SESW, W2SE;
Secs. 28 and 33: All;
Sec. 34: NWNE, W2.
2,222.45 Acres
Sevier County, Utah
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-002
T. 20 S., R. 1 W., Salt Lake
Sec. 30: All.
610.84 Acres
Sevier County, Utah
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-003
T. 21 S., R. 1 W., Salt Lake
Sec. 3: Lots 5-7;
Secs. 4, 5 and 6: All.
2,256.63 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-72: High Potential Paleontological Resources
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-004
T. 21 S., R. 1 W., Salt Lake
Secs. 7 and 8: All;
Sec. 9: NENE, W2E2, W2.
1,805.76 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-72: High Potential Paleontological Resources
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-005
T. 21 S., R. 1 W., Salt Lake
Secs. 17 and 18: All;
Sec. 19: Lots 1-6, SWNE, SENW, SE;
Sec. 20: NE, N2NW, SENW, SW, NESE, SWSE.
2,276.97 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-72: High Potential Paleontological Resources
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-006
T. 21 S., R. 1 W., Salt Lake
Sec. 29: NWNE, NW, N2SW, SWSW;
Sec. 30: Lots 1-8, W2NE, E2NW, NESW, N2SE, SESE;
Sec. 31: Lots 1-13, E2NE, NESE;
Sec. 35: N2SW, SWSW.
1,592.85 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-72: High Potential Paleontological Resources
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-008

T. 22 S., R. 1 W., Salt Lake
Sec. 19: SE;
Sec. 20: SENE, SWNW, W2SW, SESW, NESE, S2SE;
Sec. 21: W2NENE, W2NE, NW, N2SW, SWSW, N2SESW, NWNWSE;
Sec. 29: Lots 1-12, SW;
Sec. 30: Lots 5-12, NENW, SESW;
Sec. 31: Lots 2, 3, 5-13, E2NW, NESW.
2,379.36 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-009

T. 23 S., R. 1 W., Salt Lake
Sec. 6: All.
623.00 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-65: Old Spanish Trail
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-010
T. 23 S., R. 1 W., Salt Lake
Sec. 15: All.
683.45 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-011
T. 23 S., R. 1 W., Salt Lake
Sec. 25: All;
Sec. 26: NE;
Secs. 27 and 28: All.
2,110.86 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-012
T. 23 S., R. 1 W., Salt Lake
Secs. 33 and 34: All;
Sec. 35: S2.
1,596.38 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-013
T. 24 S., R. 1 W., Salt Lake
Secs. 17 and 18: All.
1,254.64 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-015
T. 21 S., R. 2 W., Salt Lake
Secs. 1, 11 and 12: All.
2,210.06 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-72: High Potential Paleontological Resources
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-016
T. 21 S., R. 2 W., Salt Lake
Sec. 3: Lots 1, 4, 5, 7-16, S2;
Sec. 10: All.
1,465.09 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-72: High Potential Paleontological Resources
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-017
T. 21 S., R. 2 W., Salt Lake
Secs. 13, 14 and 15: All.
1,965.02 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-72: High Potential Paleontological Resources
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-020
T. 22 S., R. 2 W., Salt Lake
Sec. 13: NW;
Sec. 14: N2, SW, W2SE;
Sec. 15: SE;
Sec. 22: All;
Sec. 23: W2NE, SENE, W2, SE;
Sec. 24: SWNW, NWSW.
2,200.00 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-023
T. 23 S., R. 2 W., Salt Lake
Sec. 5: ALL;
Sec. 7: Lots 3, 4, NE, SENW;
Sec. 12: Lots 1-3, E2E2;
Sec. 14: SENE, E2SE;
Sec. 23: NE, N2SE;
Sec. 26: SENE, NESE;
Sec. 33: E2SE;
Sec. 34: SWNW, W2SW.
1,832.02 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-034
T. 17 S., R. 1 E., Salt Lake
Sec. 5 and 30: All.
1,403.60 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-035
T. 19 S., R. 1 E., Salt Lake
Sec. 1: Lot 4, SESE;
Sec. 5: SESW;
Sec. 8: SENWSENE, E2SWNWSENE, SWSENE;
Sec. 12: E2, SENW;
Sec. 24: N2NESE, SENESE, N2NWSE, SESE;
Sec. 25: E2NE, NESE.
703.92 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-037
T. 20 S., R. 1 E., Salt Lake
Sec. 33: SWNE, S2NW, SW, W2SE.
360.00 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-038
T. 21 S., R. 1 E., Salt Lake
Sec. 5: Lot 1, SENE, N2SE, SESE;
Sec. 12: W2NW, SENW, SW, S2SE;
Sec. 14: SE.
720.13 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-039
T. 13 S., R. 2 E., Salt Lake
Sec. 10: E2;
Sec. 11: S2N2, S2;
Sec. 12: NENE, SWNE, N2SW;
Sec. 13: Lots 2, 3, SENW, NESW;
Sec. 14: N2N2;
Sec. 15: N2NE.
1,361.40 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-043
T. 14 S., R. 2 E., Salt Lake
Sec. 11: Lots 4-6;
Sec. 14: W2NE, N2NW, SENW;
Sec. 23: SW, W2SE;
Sec. 26: NWNE, N2NW, NWSE.
717.17 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-047
T. 15 S., R. 2 E., Salt Lake
Sec. 2: Lots 4-9.
50.53 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-053
T. 19 S., R. 2 E., Salt Lake
Sec. 5: Lot 4, SWNW;
Sec. 6: All;
Sec. 7: Lots 1-4, NWNE, E2NW;
Sec. 17: NWNW.
1,039.53 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-72: High Potential Paleontological Resources
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-056
T. 12 S., R. 3 E., Salt Lake
Sec. 23: NESE, S2SE;
Sec. 24: SW, W2SE, SESE.
400.00 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-057
T. 14 S., R. 3 E., Salt Lake
Sec. 1: SWSW.
40.00 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-058
T. 16 S., R. 3 E., Salt Lake
Sec. 1: Lot 9;
Sec. 11: Lots 1-6;
Sec. 12: All.
947.40 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-059
T. 12 S., R. 4 E., Salt Lake
Sec. 6: Lots 2-6, SWNE, SENW, NESW, NWSE;
Sec. 7: Lots 3, 4, E2SW;
Sec. 15: W2SW;
Sec. 19: Lots 3, 4;
Sec. 21: NENE;
Sec. 22: NWNW.
852.60 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-060
T. 12 S., R. 4 E., Salt Lake
Sec. 26: W2W2;
Sec. 27: E2NE, SESW, S2SE;
Sec. 34: N2, NWSW;
Sec. 35: W2NW, S2.
1,120.00 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-061
T. 13 S., R. 4 E., Salt Lake
Sec. 10: NENE.
40.00 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-064
T. 16 S., R. 4 E., Salt Lake
Sec. 7: Lot 3, NESW, SE.
240.48 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-080
T. 13 S., R. 5 E., Salt Lake
Sec. 7: Lots 2, 3, SESW;
Sec. 18: SENW, NESW;
Sec. 31: SENE, E2SE.
320.00 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-089
T. 14 S., R. 5 E., Salt Lake
Sec. 3: N2SW;
Sec. 7: SENE;
Sec. 22: N2N2.
280.00 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-092
T. 15 S., R. 5 E., Salt Lake
Sec. 3: S2NE, SWSW, SE;
Sec. 4: Lot 2, SESE.
370.50 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-118
T. 22 S., R. 5 E., Salt Lake
Sec. 27: All;
Protraction Block 49: unsurveyed;
Secs. 34 and 35: All.
2,550.00 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-344: NSO – Old Woman Front ACEC

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-120
T. 23 S., R. 5 E., Salt Lake
Sec. 1: All;
Sec. 2: Lot 4;
Sec. 3: All.
1,316.15 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-65: Old Spanish Trail
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-121
T. 23 S., R. 5 E., Salt Lake
Secs. 4, 5, 6 and 7: All.
2,135.29 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-122
T. 23 S., R. 5 E., Salt Lake
Secs. 8, 9, 10 and 11: All.
2,560.00 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-65: Old Spanish Trail
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-123
T. 23 S., R. 5 E., Salt Lake
Secs. 12 and 13: All;
Sec. 14: NE, N2NW, S2;
Sec. 15: W2.
2,160.00 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-65: Old Spanish Trail
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-124
T. 23 S., R. 5 E., Salt Lake
Secs. 17, 18 and 19: All;
Sec. 20: N2NE, SWNE, W2, NWSE.
1,979.92 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-125
T. 23 S., R. 5 E., Salt Lake
Sec. 21: NENE, NWNW, SE;
Sec. 22: SENE, NWNW, NWSW, SWSE;
Sec. 23: S2NE, NESW, S2SW, SE;
Sec. 26: All;
Sec. 27: E2, E2W2, SWSW;
Sec. 28: All.
2,560.00 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-161: CSU – VRM Class II Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-65: Old Spanish Trail
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls and UT-LN-102: Air Quality Analysis

UT0514-126
T. 23 S., R. 5 E., Salt Lake
Sec. 29: Lots 1-6, SENE, W2NW, NWSW, NESE, NENWSE, SENWNWSE, S2NWSE, S2SE;
Sec. 30: Lots 1-4, NE, N2SE;
Sec. 31: Lots 1-4, S2SE.
844.79 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-161: CSU – VRM Class II Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-65: Old Spanish Trail
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-127
T. 23 S., R. 5 E., Salt Lake
Secs. 33, 34 and 35: All.
1,920.00 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas
UT-S-161: CSU – VRM Class II Areas
UT-S-171: NSO – Cultural Resources
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-65: Old Spanish Trail
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-128
T. 24 S., R. 5 E., Salt Lake
Sec. 3: All.
856.40 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-161: CSU – VRM Class II Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-129
T. 24 S., R. 5 E., Salt Lake
Sec. 4: All;
Sec. 5: Lots 9-16, S2;
Sec. 6: Lots 7-14, SE.
1,932.44 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-121: NSO – Riparian and Wetland Areas
UT-S-161: CSU – VRM Class II Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-65: Old Spanish Trail
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-130
T. 24 S., R. 5 E., Salt Lake
Secs. 7, 8, 9 and 10: All.
2,394.80 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-161: CSU – VRM Class II Areas
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-132
T. 24 S., R. 5 E., Salt Lake
Secs. 17, 18 and 19: All.
1,689.43 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-221: CSU/TL – Utah Prairie Dogs
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-133
T. 24 S., R. 5 E., Salt Lake
Sec. 20: Lots 3-4, S2NW, SW.
326.57 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-135
T. 24 S., R. 5 E., Salt Lake
Sec. 29: SWNE, NW, E2SW, SE;
Sec. 30: Lots 1-4, NE, E2W2, NWSE.
854.48 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-221: CSU/TL – Utah Prairie Dogs
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-136
T. 24 S., R. 5 E., Salt Lake
Secs. 33, and 34: All.
1280.00 Acres
Sevier County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat
UT-S-310: CSU/TL – Last Chance Townsendia

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

ACQUIRED LANDS

UT0514-137
U.S. Interest 50%
T. 15 S., R. 3 E., Salt Lake
Sec. 24: Portions of S2SW.
11.08 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-138
U.S. Interest 50%
T. 13 S., R. 4 E., Salt Lake
Sec. 36: Portions of N2.
105.59 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

UT0514-141
U.S. Interest 50%
T. 16 S., R. 4 E., Salt Lake
Sec. 6: Portions of Lots 1 and 2.
25.90 Acres
Sanpete County, Utah
Richfield Field Office

STIPULATIONS
UT-S-01: Air Quality
UT-S-102: CSU – Fragile Soils/Slopes 30 Percent or Greater
UT-S-233: TL – Crucial Mule Deer and Elk Winter Habitat

NOTICES
UT-LN-40: Golden Eagle Habitat
UT-LN-45: Migratory Bird
UT-LN-49: Utah Sensitive Species
UT-LN-52: Noxious Weeds
UT-LN-91: Water and Watershed Protection
UT-LN-99: Regional Ozone Formation Controls
UT-LN-102: Air Quality Analysis

LEASE STIPULATIONS SUMMARY

UT-S-01	**AIR QUALITY** All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower shall not emit more than 2 grams of NO_x per horsepower-hour. **Exception:** This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower. **Modification**: None **Waiver**: None **AND** All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NO_x per horsepower-hour. **Exception**: None **Modification**: None **Waiver**: None
UT-S-102	**CONTROLLED SURFACE USE – FRAGILE SOILS/SLOPES 30 PERCENT OR GREATER** No surface disturbing proposed projects involving construction on slopes greater than 30. If the action cannot be avoided, rerouted, or relocated than a proposed project will include an erosion control strategy, reclamation and a site plan with a detailed survey and design completed by a certified engineer. This proposed project must be approved by the BLM prior to construction and maintenance. **Exception:** None **Modification:** None **Waiver**: None
UT-S-121	**NO SURFACE OCCUPANCY – RIPARIAN AND WETLAND AREAS** No surface disturbance and/or occupancy within buffer zones around natural springs. Base the size of the buffer on hydrological, riparian, and other factors necessary to protect the water quality of the springs. If these factors cannot be determined, maintain a 330-foot buffer zone from outer edge. **Exception:** Consider exceptions if it can be shown that (1) there are no practical alternatives to the disturbance, (2) all long-term impacts can be fully mitigated, and (3) the activity will benefit and enhance the riparian area. Consider compensatory mitigation where surface disturbance cannot be avoided within riparian wetland habitats on a site-specific basis. **Modification:** None **Waiver:** None

UT-S-161	**CONTROLLED SURFACE USE – VRM CLASS II AREAS** Surface disturbing activities must meet the objectives of Visual Resource Management (VRM) Class II. **Exception:** The level of change to the landscape should be low; management activities may be seen, but should not attract the attention of the casual observer. Any change to the landscape must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Surface disturbing activities that are determined to be compatible and consistent with the protection or enhancement of the resource values are exempted. Also, recognized utility corridors are exempted only for utility projects, which would be managed according to VRM Class III objectives. **Modification**: None **Waiver**: None.
UT-S-171	**NO SURFACE OCCUPANCY – CULTURAL RESOURCES** No Surface Occupancy within ¼ mile or within the visual horizon, whichever is closer, of cultural sites where the landscape features are important in understanding the property or sites where setting directly contributes to the significance of the property. **Exception**: An exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values or will provide suitable opportunities for public enjoyment of these resources. **Modification**: None **Waiver**: None

UT-S-221	**CONTROLLED SURFACE USE/TIMING LIMITATIONS – UTAH PRAIRIE DOG** The Lessee/Operator is given notice that lands in this lease may contain historic and/or occupied Utah prairie dog habitat, a threatened species under the Endangered Species Act (ESA). Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend on whether the action is temporary or permanent, and whether it occurs when prairie dogs are active or hibernating. A temporary action is completed prior to the following active season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one activity/hibernation season and/or causes a loss of Utah prairie dog habitat or displaces prairie dogs through disturbances (e.g., creation of a permanent structure). The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the ESA. Integration of, and adherence to, these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of ESA Section 7 consultation at the permit stage. Current avoidance and minimization measures include the following: 1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s). 2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated. 3. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in prairie dog habitat. 4. Surface occupancy or other surface disturbing activity will be avoided within 0.5 mile of active prairie dog colonies. 5. Permanent surface disturbance or facilities will be avoided within 0.5 mile of potentially suitable, unoccupied prairie dog habitat, identified and mapped by Utah Division of Wildlife Resources since 1976. 6. The lessee/operator should consider if fencing infrastructure on well pad, e.g., drill pads, tank batteries, and compressors, would be needed to protect equipment from burrowing activities. In addition, the operator should consider if future surface disturbing activities would be required at the site. 7. Within occupied habitat, set a 25 mph speed limit on operator-created and maintained roads. 8. Limit disturbances to and within suitable habitat by staying on designated routes. 9. Limit new access routes created by the project. Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the ESA. **Exception**: None **Modification**: None **Waiver**: None

UT-S-233	**TIMING LIMITATION - CRUCIAL MULE DEER AND ELK WINTER HABITAT** No surface disturbing activities within crucial mule deer and elk habitats from **December 15 through April 15** to protect winter habitats. **Exception:** This stipulation does not apply to the maintenance and operation of existing and ongoing facilities. An exception may be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action can be adequately mitigated or it is determined the habitat is not being used during the winter period for any given year. **Modification:** The authorized officer may modify the boundaries of the stipulation area if (1) a portion of the area is not being used as crucial winter range by deer/elk, (2) habitat outside of stipulation boundaries is being used as crucial winter range and needs to be protected, or (3) the migration patterns have changed causing a difference in the season of use. **Waiver:** A waiver may be granted if the winter range habitat is unsuitable or unoccupied during winter months by deer/elk and there is no reasonable likelihood of future winter range use.
UT-S-344	**NO SURFACE OCCUPANCY – OLD WOMAN FRONT ACEC** No surface occupancy within Old Woman Front ACEC to protect relict vegetation. **Exception:** None **Modification:** None **Waiver**: None

UT-S-310	**CONTROLLED SURFACE USE/TIMING LIMITATIONS – LAST CHANCE TOWNSENDIA (*TOWNSENDIA APRICA*)** In order to minimize effects to the federally threatened Last Chance townsendia, the Bureau of Land Management (BLM), in coordination with the U.S. Fish and Wildlife Service (Service), has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance operations) are in compliance with the Endangered Species Act (ESA). For the purposes of this document, the follow terms are so defined: *Potential habitat* is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment. *Suitable habitat* is defined as areas which contain or exhibit the specific components or constituents necessary for plant persistence; determined by field inspection and/or surveys; may or may not contain last chance townsendia; habitat descriptions can be found in Federal Register Notice and species recovery plan links at <http://www.fws.gov/endangered/wildlife.html>. *Occupied habitat* is defined as areas currently or historically known to support last chance townsendia; synonymous with "known habitat." The following avoidance and minimization measures should be included in the Plan of Development: 1. Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat prior to any ground disturbing activities to determine if suitable last chance townsendia habitat is present. 2. Site inventories will be conducted within suitable habitat to determine occupancy. Where standard surveys are technically infeasible and otherwise hazardous due to topography, slope, etc., suitable habitat will be assessed and mapped for avoidance (hereafter, "avoidance areas"); in such cases, in general, 300' buffers will be maintained between surface disturbance and avoidance areas. However, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Where conditions allow, inventories: a. Must be conducted by qualified individual(s) and according to BLM and Service accepted survey protocols, b. Will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season, at a time when the plant can be detected (usually April 1st to May 30th, however, surveyors should verify that the plant is flowering by contacting a BLM or FWS botanist or demonstrating that the nearest known population is in flower), c. Will occur within 300' from the centerline of the proposed right-of-way for surface pipelines or roads; and within 300' from the perimeter of disturbance for the proposed well pad including the well pad, d. Will include, but not be limited to, plant species lists and habitat characteristics, and e. Will be valid until April 1st the following year.

UT-S-310 (Continued)	3. Design project infrastructure to minimize impacts within suitable habitat: a. Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 300' buffers, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat, b. Reduce well pad size to the minimum needed, without compromising safety, c. Where technically and economically feasible, use directional drilling or multiple wells from the same pad, d. Limit new access routes created by the project, e. Roads and utilities should share common right-of-ways where possible, f. Reduce the width of right-of-ways and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat, g. Place signing to limit off-road travel in sensitive areas, and h. Stay on designated routes and other cleared/approved areas. i. All disturbed areas will be revegetated with native species comprised of species indigenous to the area and non-native species that are not likely to invade other areas. 4. Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants: a. Follow the above recommendations (#3) for project design within suitable habitats, b. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged, c. Construction of roads will occur such that the edge of the right of way is at least 300' from any plant and 300' from avoidance areas, d. Roads will be graveled within occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15th to June 30th (flowering period); dust abatement applications will be comprised of water only, e. The edge of the well pad should be located at least 300' away from plants and avoidance areas, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat, f. Surface pipelines will be laid such that a 300' buffer exists between the edge of the right of way and plants and 300' between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crosses suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat, g. Construction activities will not occur from April 15th through June 30th within occupied habitat, h. Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging, temporary fencing, rebar, etc., i. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and j. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.

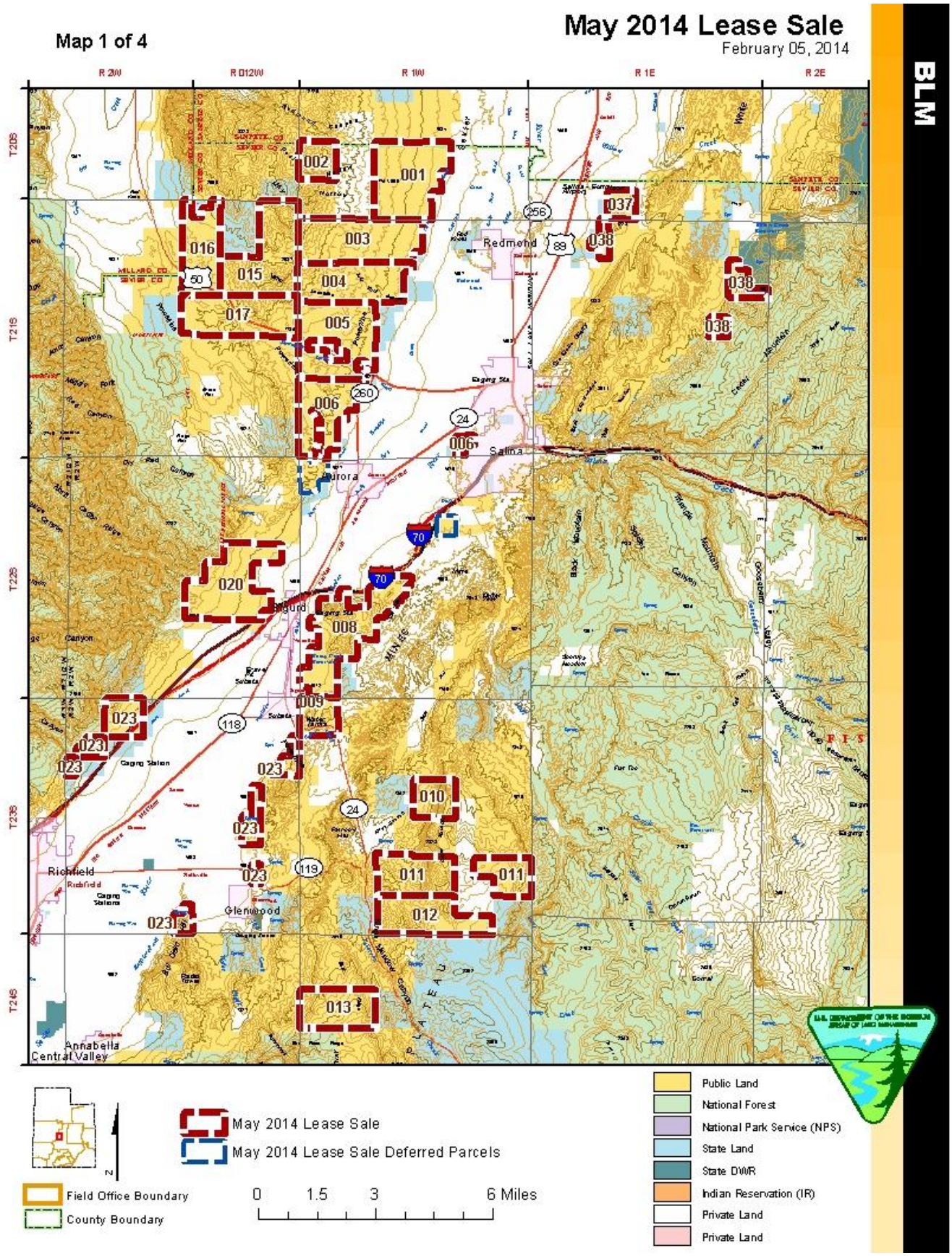
UT-S-310 (Continued)	5. Occupied last chance townsendia habitats within 300' of the edge of the surface pipelines right of ways, 300' of the edge of the roads' right of ways, and 300' from the edge of the well pad shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service. 6. Reinitiation of section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the last chance townsendia is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA. **Exception**: None **Modification**: None **Waiver**: None

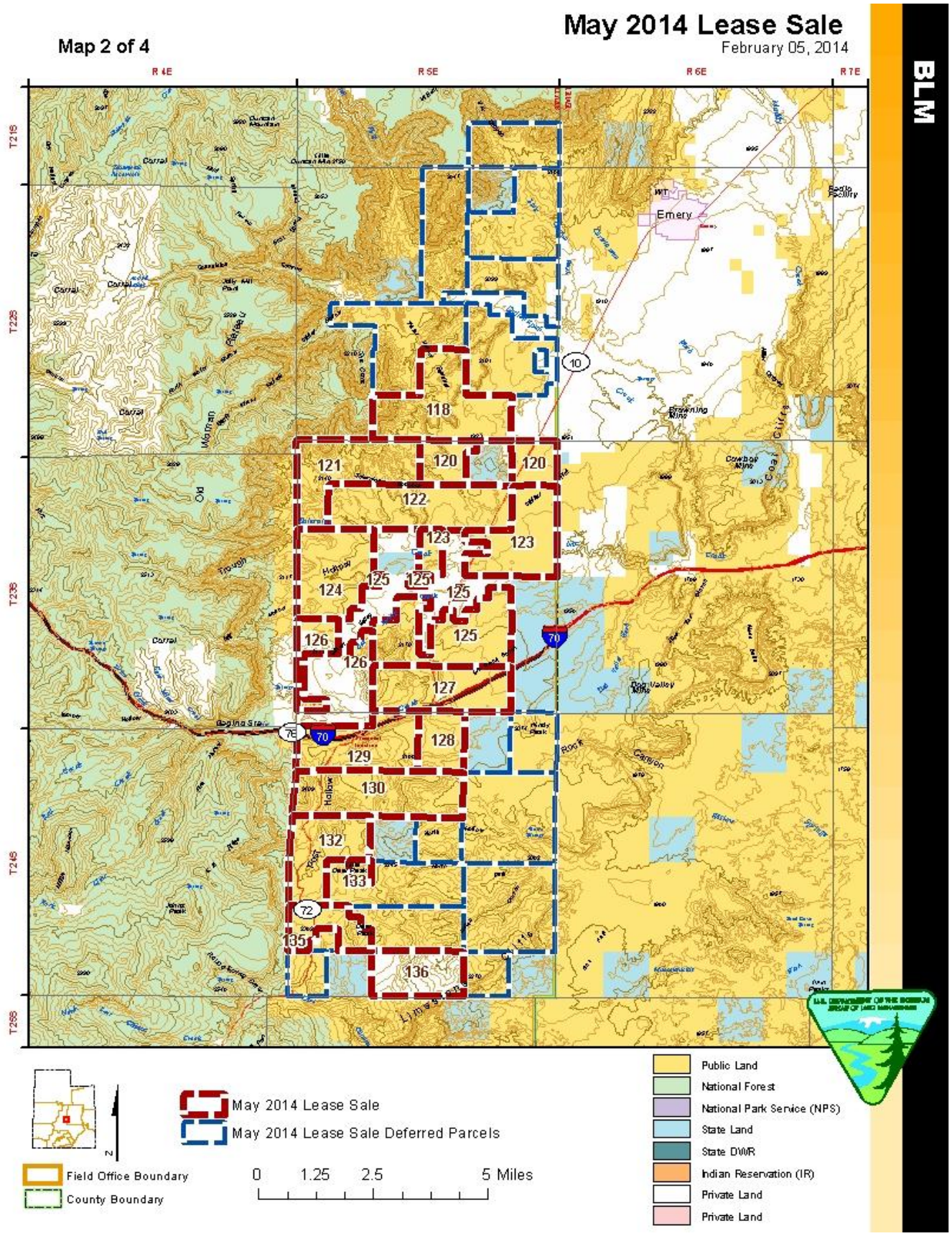
LEASE NOTICES SUMMARY

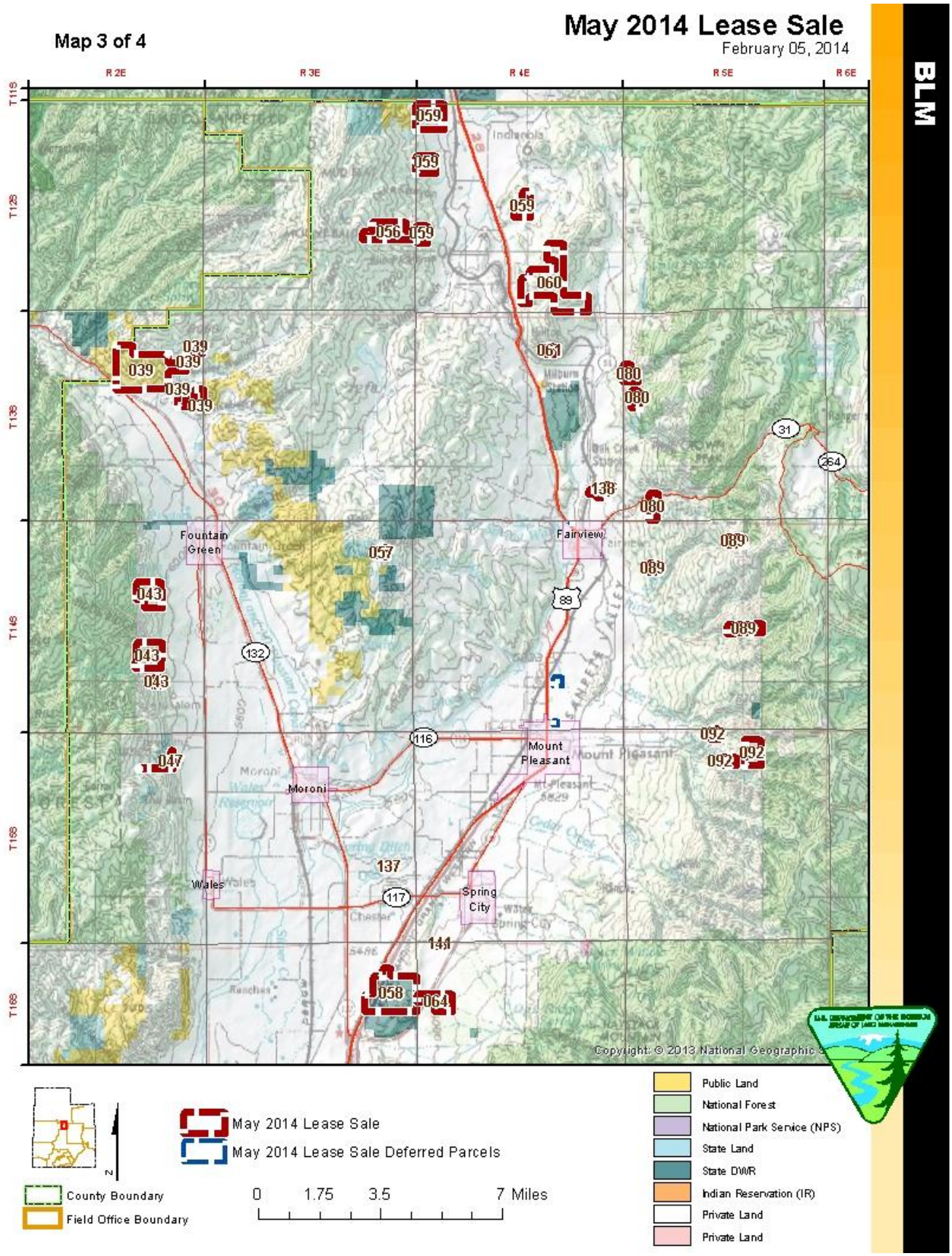
UT-LN-40	**GOLDEN EAGLE HABITAT** The lessee/operator is given notice that lands in this lease have been identified as containing Golden Eagle Habitat. Modifications to the Surface Use Plan of Operations may be required in order to protect the Golden Eagle and/or habitat from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2.
UT-LN-45	**MIGRATORY BIRD** The lessee/operator is given notice that surveys for nesting migratory birds may be required during migratory bird breeding season whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within priority habitats. Surveys should focus on identified priority bird species in Utah. Field surveys will be conducted as determined by the authorized officer of the Bureau of Land Management. Based on the result of the field survey, the authorized officer will determine appropriate buffers and timing limitations. This notice may be waived, excepted, or modified by the authorized officer if either the resource values change or the lessee/operator demonstrates that adverse impacts can be mitigated.
UT-LN-49	**UTAH SENSITIVE SPECIES** The lessee/operator is given notice that no surface use or otherwise disruptive activity would be allowed that would result in direct disturbance to populations or individual special status plant and animal species, including those listed on the BLM sensitive species list and the Utah sensitive species list. The lessee/operator is also given notice that lands in this parcel have been identified as containing potential habitat for species on the Utah Sensitive Species List. Modifications to the Surface Use Plan of Operations may be required in order to protect these resources from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, Migratory Bird Treaty Act and 43 CFR 3101.1-2.
UT-LN-52	**NOXIOUS WEEDS** The lessee/operator is given notice that lands in this lease have been identified as containing or are near areas containing noxious weeds. Best management practices to prevent or control noxious weeds may be required for operations on the lease.
UT-LN-65	**OLD SPANISH TRAIL** The lessee/operator is given notice that lands in this lease are crossed by the Old Spanish Trail National Historic Trail [Old Spanish Trail Recognition Act of 2002, (Old Spanish Trail PLO 107-325)]. Modifications to the Surface Use Plan of Operations may be required in order to protect the historic integrity of the trail. Coordination with the National Park Service may be necessary.
UT-LN-72	**HIGH POTENTIAL PALEONTOLOGICAL RESOURCES** The lessee/operator is given notice that lands in this lease have been identified as having high potential for paleontological resources. Planned projects should be consistent with BLM Manual and Handbook H8270-1, Chapter III (A) and III (B) to avoid areas where significant fossils are known or predicted to occur or to provide for other mitigation of possible adverse effects (RX, NF, ESR). Modifications to the Surface Use Plan of Operations may be required in order to protect paleontological resources from surface disturbing activities in accordance with Section 6 of the lease terms and 43 CFR 3101.1-2.

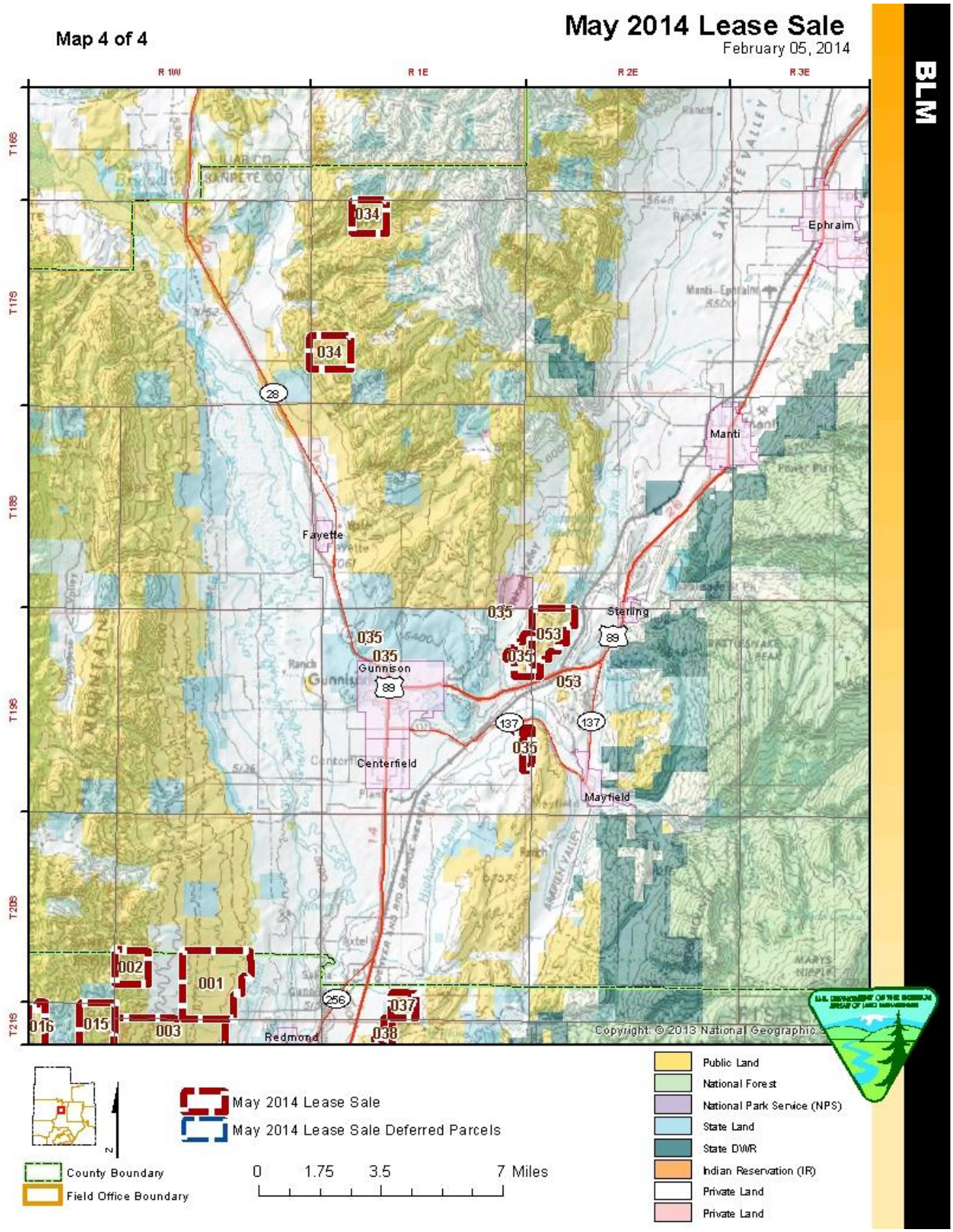
UT-LN-91	**WATER AND WATERSHED PROTECTION** The lessee/operator is given notice that this lease may need modifications to the Surface Use Plan of Operations in order to prevent water pollution and protect municipal and non-municipal watershed areas. No surface use or otherwise disruptive activity allowed within 500 feet of a supply well in order to prevent water quality degradation in accordance with section 6 of the lease terms and 43CFR3101.1-2.
UT-LN-99	**REGIONAL OZONE FORMATION CONTROLS** To mitigate any potential impact oil and gas development emissions may have on regional ozone formation, the following Best Management Practices (BMPs) would be required for any development projects: • Tier II or better drilling rig engines • Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines <300HP and 1g NOx/bhp-hr for engines >300HP • Low bleed or no bleed pneumatic pump valves • Dehydrator VOC emission controls to +95% efficiency • Tank VOC emission controls to +95% efficiency
UT-LN-102	**AIR QUALITY ANALYSIS** The lessee/operator is given notice that prior to project-specific approval, additional air quality analyses may be required to comply with the National Environmental Policy Act, Federal Land Policy Management Act, and/or other applicable laws and regulations. Analyses may include dispersion modeling and/or photochemical modeling for deposition and visibility impacts analysis, control equipment determinations, and/or emission inventory development. These analyses may result in the imposition of additional project-specific air quality control measures.

APPENDIX B, PARCEL MAPS


Map 1 of 4
May 2014 Lease Sale
February 05, 2014
BLM
R 2W
R 012W
R 1W
R 1E
R 2E
T20S
T21S
T22S
T23S
T24S
002
001
003
004
005
006
016
015
017
037
038
020
008
009
023
010
011
012
013
Redmond
Aurora
Salina
Richfield
Glenwood
Annabella
Central Valley
Sigurd
Caging Station
Public Land
National Forest
National Park Service (NPS)
State Land
State DWR
Indian Reservation (IR)
Private Land
Private Land
May 2014 Lease Sale
May 2014 Lease Sale Deferred Parcels
Field Office Boundary
County Boundary
0 1.5 3 6 Miles


May 2014 Lease Sale
February 05, 2014
Map 2 of 4
BLM
R 4E
R 5E
R 6E
R 7E
T 21S
T 22S
T 23S
T 24S
T 25S
Emery
118
120
121
122
123
124
125
126
127
128
129
130
132
133
135
136
May 2014 Lease Sale
May 2014 Lease Sale Deferred Parcels
Field Office Boundary
County Boundary
0 1.25 2.5 5 Miles
Public Land
National Forest
National Park Service (NPS)
State Land
State DWR
Indian Reservation (IR)
Private Land
Private Land


Map 3 of 4
May 2014 Lease Sale
February 05, 2014
BLM
R 2E
R 3E
R 4E
R 5E
R 6E
T11S
T12S
T13S
T14S
T15S
T16S
059
059
059
056
059
060
061
039
039
039
039
039
080
080
080
138
089
089
089
057
043
043
043
047
092
092
092
137
141
058
064
Fountain Green
Fairview
Mount Pleasant
Moroni
Wales
Spring City
31
264
89
132
116
117
Copyright © 2013 National Geographic
May 2014 Lease Sale
May 2014 Lease Sale Deferred Parcels
County Boundary
Field Office Boundary
0 1.75 3.5 7 Miles
Public Land
National Forest
National Park Service (NPS)
State Land
State DWR
Indian Reservation (IR)
Private Land
Private Land


Map 4 of 4
May 2014 Lease Sale
February 05, 2014
BLM
R 1W
R 1E
R 2E
R 3E
T16S
T17S
T18S
T19S
T20S
Ephraim
Manti
Fayette
Gunnison
Sterling
Centerfield
Mayfield
Redmond
034
035
053
001
002
003
015
016
037
038
Copyright © 2013 National Geographic
May 2014 Lease Sale
May 2014 Lease Sale Deferred Parcels
County Boundary
Field Office Boundary
0 1.75 3.5 7 Miles
Public Land
National Forest
National Park Service (NPS)
State Land
State DWR
Indian Reservation (IR)
Private Land
Private Land

APPENDIX C, INTERDISCIPLINARY TEAM CHECKLIST

INTERDISCIPLINARY TEAM CHECKLIST

Project Title: May 2014 Oil and Gas Lease Sale

NEPA Log Number: DOI-BLM-UT-C020-2013-0027-EA

File/Serial Number: Not Applicable

Project Leader: Stan Andersen

DETERMINATION OF STAFF:

NP = not present in the area impacted by the proposed or alternative actions
NI = present, but not affected to a degree that detailed analysis is required
PI = present with potential for relevant impact that need to be analyzed in detail in the EA
NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

Determi-nation	Resource	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (Includes Supplemental Authorities Appendix 1 H-1790-1)				
PI	Air Quality	Sanpete and Sevier Counties is in attainment of the National Ambient Air Quality Standards (NAAQS) for all pollutants. Currently air quality in the area of the proposed leasing meets State Department of Environmental Quality and the Division of Air Quality Standards. Leasing would have no impact on air quality. However, there is some expectation that exploration could occur. Any ground disturbing activity would have to first be authorized as a lease operation but only through additional NEPA analysis. Activities which may be authorized on these parcels subsequent to the lease sale may produce emissions of regulated air pollutants and/or pollutants that could impact air quality related values. Emissions from earth-moving equipment, vehicle traffic, drilling and completion activities, separators, oil storage tanks, dehydration units, and daily tailpipe and fugitive dust emissions could affect air quality. Hazardous air pollutants (HAPs) are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental impacts. The EPA has classified 187 air pollutants as HAPs. Examples of listed HAPs associated with the oil and gas industry include formaldehyde, benzene, toluene, ethylbenzene, isomers of xylene (BTEX) compounds, and normal-hexane (n-hexane). There are no applicable Federal or State of Utah ambient air quality standards for assessing potential HAP impacts to human health.	Leonard Herr	9/20/2013

Determi-nation	Resource	Rationale for Determination	Signature	Date
		Application of stipulation UT-S-01 and lease notices UT-LN-99 and UT-LN-102 are warranted on all parcels.		
NI	Areas of Critical Environmental Concern	One Area of Critical Environmental Concern (ACEC) was identified in the 54 parcels available for leasing. This is the Old Woman Front ACEC, which is approximately 330 acres in size and is partially located within identified parcel 118 (128 acres). Application of UT-S-344 is warranted. Although identified in thes parcel, the ACEC does not occupy the whole of the identified parcel. In the Richfield Field Office 2008 RMP, this ACEC was specifically identified for relict vegetation being relevant and important. Management prescriptions include allowing no use that will cause irreparable damage to the relevant and important values (relict vegetation), and reducing surface-disturbing activities within the area, thereby protecting vegetation and relevant and important values; restrictions include closing the area to OHV use; managing the area as open to leasing subject to major constraints (NSO), making the areas unavailable for livestock grazing; and acquiring inholdings. Lands within parcel 116 are being deferred. So long as management prescriptions identified in the 2008 Richfield Field Office RMP are followed, there would be no impact on Areas of Critical Environmental Concern in the Richfield Field Office.	Jennifer Evans	2.4.2014
NI	BLM Natural Areas	The Richfield Field Office RMP was reviewed. There are no BLM Natural Areas within the parcels in the proposed action.	Jennifer Evans	9.4.2013
NI	Cultural Resources	BLM completed a Class I cultural resource records search and analysis for the 54 proposed oil and gas lease parcels. The Class I survey indicated that site densities in the 54 parcels are low, ranging from 0 sites per acre to .08 sites per acre. No cultural resource inventory has been conducted in 16 of the parcels in northern Sanpete County that are split estate. Despite lack of survey in the individual parcels, a 15,295 acre inventory in the region identified 66 sites, 16 of which were eligible. The inventory further demonstrates the low density of sites in the region. Based on the low site density across the parcels, potential lessees could likely place oil and gas facilities within most of the parcels	M. Jared Lundell	2-4-2014

Determi-nation	Resource	Rationale for Determination	Signature	Date
		without impacting cultural resources. The southern portions of Parcels UT514-111 and UT514-114 and north portions of UT514-116 and UT514-117 are in culturally sensitive areas. A previous EIS, cultural inventories, and ethnographic studies identified the area as archaeologically significant and culturally significant to Native American tribes. As a result of these findings and other resource concerns the previous FEIS and ROD selected an alternative outside the areas of concern. In following the previous EIS and comments from Native American tribes on the current O&G lease, parcels UT514-111, UT514-114, UT514-116, and UT514-117 should be deferred from the May 2014 lease sale. Parcels UT514-120, U514-122, UT514-123, UT514-125, UT514-126, UT514-127, and UT514-129 all lay within a .5 mile buffer of the designated Old Spanish Trail corridor (Logan Simpson Design Inc. 2011). The corridor passes through parcels UT514-009 UT514-120, UT514-122, UT514-123, UT514-125, and UT514-127. It is likely that any oil and gas development in these parcels will impact the viewshed of the Old Spanish Trail in this region where the historical landscape is relatively pristine. Any oil and gas development in these parcels, along the OST, will likely need to mitigate impacts to the historic landscape. The deferral of parcels UT514-111, UT514-114, UT514-116, and UT514-117 and the lease notice UT-LN-65 for parcels UT514-009, UT514-120, UT514-122, UT514-123, UT514-125, UT514-126, UT514-127, and UT514-129 should alter the proposed action such that cultural resources should not be impacted by the leasing of the 54 parcels. As summarized in the consultation table at Chapter 5.2, BLM consulted with Native American tribes and the SHPO regarding its determination of "No Adverse Effect" [36 CFR 800.5 (b)] for the May 20, 2014 oil and gas lease sale. On December 11, 2013, SHPO provided its concurrence with the BLM No Adverse Effect determination for the May 20, 2014 oil and gas lease sale. UT-LN-65: "The lessee/operator is given notice that lands in this lease are crossed by the Old Spanish Trail National Historic Trail (Old Spanish Trail		

Determi-nation	Resource	Rationale for Determination	Signature	Date
		Recognition Act of 2002, (Old Spanish Trail PLO 107-325)). Modifications to the Surface Use Plan of Operations may be required in order to protect the historic integrity of the trail. Coordination with the National Park Service may be necessary." Stipulation UT-S-171 will be added to parcel UT514-127 to provide a buffer around important cultural resources. In addition WO-IM-2005-003 stipulation on cultural resources should be added to all parcels: "This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated." If oil and gas development results from any lease, site specific Class III cultural resource inventories will be conducted. The BLM will also complete an additional EA and conduct additional consultation with Native American tribes and the State Historic Preservation Officer in association with any permits to drill.		
NI	Environmental Justice	As defined in EO 12898, minority, low income populations and disadvantaged groups may be present within the counties involved in this lease sale. The stipulations and notices applied to the subject parcels do not place an undue burden on these groups. Leasing would not adversely or disproportionately affect minority, low income or disadvantaged groups.	Stan Andersen	10/25/13
NP	Farmlands (Prime or Unique)	None of the identified parcels qualify as prime or unique farmlands according to the NRCS Soil Surveys of the Sanpete Valley Area and the Sevier County Areas. There are parcels that are categorized as 'prime if irrigated'. However, to be classified as 'prime' they require a dependable moisture supply that comes from either precipitation or irrigation.	Brant Hallows	10/29/13

Determi-nation	Resource	Rationale for Determination	Signature	Date
		Because all water is already allocated throughout the water basins, there is no dependable water source for those lands classified as 'prime if irrigated' and therefore do not warrant special protective measures.		
NI	Fish and Wildlife	Detailed information on the inclusion of the appropriate lease notices and stipulations are contained in the RMP. A particular species habitat and corresponding criteria were identified from GIS data layers developed by the BLM, Utah Division of Wildlife Resources/Utah Natural Heritage Program data and field office records. These habitats are addressed in the LUP and provided needed protections through stipulations or notices. Crucial deer and/or elk winter/spring range occurs on the following parcels: 001,002,003, 008, 009, 010, 011, 012, 013, 023, 034, 035, 038, 039, 043, 047, 053, 056, 057, 058, 059, 060, 061, 064, 080, 089, 092, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 132, 133, 135, 136, 138, & 141. The application of stipulation UT-S-233 is warranted on these parcels.	Larry Greenwood	2-4-2014
NI	Floodplains	Floodplains, as defined by EO 11988, FEMA, HUD, Corps of Engineers and the RMP, are present. The lease sale and application of stipulations/notices would not affect a county's ability to obtain and/or maintain Federal flood insurance. Through design features, BLM would avoid occupancy and modification of floodplain development. The hazard degree is low. Impacts to floodplains are not expected to reach a level that would require adding a lease notice to any of the parcels. Refer also to the riparian zones and wetland areas discussion. Also, the proposed action will not increase the risk of flooding or damage to human life and property and it will not be contrary to Executive Order 11988 – Floodplain Management.	Brant Hallows	2.4.2014
NI	Fuels/Fire Management	The proposed action would have no impact on Fuels/Fire Management. The implementation of appropriate reclamation standards at the APD stage would prevent an increase of hazardous fuels.	Bob Bate	10/25/13
NI	Geology /Mineral Resources/Energy Production	Presently ongoing RMP/FEIS litigation may necessitate future review of this leasing action prior to implementation should the RMP/TMP be found inadequate timely. While conflicts could arise between oil & gas	Joe Manning	11/06/13

Determi-nation	Resource	Rationale for Determination	Signature	Date
		operations and other mineral operations, these can generally be mitigated under the regulations 3101.1-2, where proposed oil and gas operations may be moved up to 200 meters or delayed by 60 days and also under the standard lease terms (Sec. 6) where siting and design of facilities may be modified to protect other resources. Leasing and exploration would have minimal impact on mineral or energy management.		
NI	Invasive Species/Noxious Weeds (EO 13112)	Noxious/invasive weed species may be present on the subject parcels. The BLM coordinates with County and local governments to conduct an active program for control of invasive species. The lessee/operator is given notice that lands in this lease have been identified as containing or are near areas containing noxious weeds. Standard operating procedures such as washing of vehicles and annual monitoring and spraying along with site specific mitigation applied as conditions of approval (COA) at the APD stage should be sufficient to prevent the spread or introduction of Invasive, Non-native species. All disturbed areas and piles of top soil should be reseeded with weed free seed the first fall after the disturbance is made to provide competition against weeds. Other constraints, including the use of certified weed free seed and vehicle/equipment wash stations, would be applied as necessary at the APD stage as documented in filing plans and conditions of approval. Control measures would be implemented during any ground disturbing activity. Treatment will occur as part of regular operations, BMPs, SOPs and site specific mitigation applied at the APD stage as COAs. Negligible impacts would be expected as a result of leasing and exploration. All disturbed areas and piles of top soil should be reseeded with weed free seed the first fall after the disturbance is made to provide competition against weeds. These expectations are required for all parcels in the lease. Application of UT-LN-52 is warranted on all parcels.	Burke Williams	8-23-13
NI	Lands/Access	As described, the proposed action would not substantially affect access to public land on a permanent basis. No roads providing access to public land would be closed for any extended period of time. The proposal would be subject to valid prior	Michael Utley	9-9-13

Determi-nation	Resource	Rationale for Determination	Signature	Date
		existing rights including county-maintained roads (See BLM internal/public Master Title Plat web site as there are various rights-of-way in the proposed areas). Any operations would be coordinated with right-of-way (ROW) holders and adjacent non-federal landowners. Off-lease ancillary facilities that cross public land, if any, may require a separate authorization (Generally Access Roads and utility ROW). It is anticipated that existing ROWs in proposed operation areas would not be affected because site specific mitigation applied at the APD stage, including the ability to move operations up to 200 meters. These measures would ensure that existing ROWs would be avoided, restored, or replaced if damaged. Surface disturbance within and outside described project areas would need to be rehabilitated and reseeded. Plans should be made for removal of any generated trash/debris from public land and discarded at an authorized facility.		
NI	Livestock Grazing/Range	Lease of the parcels will not impact livestock grazing within the identified grazing allotments. However, there is an inherent expectation that there may be oil or gas activities on each leased parcel. Any activity that involves surface disturbance or direct resource impacts would have to be authorized as a lease operation through future NEPA analysis, on a case-by-case basis. Impacts to livestock grazing may occur as a result of subsequent actions including exploration development, production, etc. Therefore, reclamation provisions/procedures including re-vegetation (utilizing appropriate seed mix based on the ecological site, elevation and topography) and road reclamation would be completed if a well were authorized. Range improvement project replacement/restoration (fences, cattle guards, etc.), noxious weed controls, would be identified in future NEPA/Decision documents on a case-by-case basis. In addition, if any range improvement projects could be impacted by wells or associated infrastructure, wells would be moved 200 meters to avoid these impacts 43 CFR 3101.1-2. The issues identified above would be addressed further on a project site specific level if an APD is filed.	Burke Williams	8-23-13
NI	Migratory Birds	Habitat for priority migratory birds occurs on all 54 parcels. The application of lease notice UT-LN-45 is warranted on all parcels.	Larry Greenwood	9-16-13

Determi-nation	Resource	Rationale for Determination	Signature	Date
		The following documents are incorporated: Utah Comprehensive Wildlife Conservation Strategy (CWCS), Utah Partners in Flight Avian Conservation Strategy Version 2.0. (Parrish, et.al. 2002), Birds of Conservation Concern (2002), Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds, MOU between the USDI BLM and USFWS to Promote the Conservation and Management of Migratory Birds (4/2010), and Utah Supplemental Planning Guidance: Raptor Best Management Practices (BLM UTSO IM 2006-096)		
NI	Native American Religious Concerns	BLM has sent letters containing notification of this lease sale and the results of our cultural resources records search to the following Tribes: Paiute Indian Tribe of Utah, Ute Indian Tribe, Hopi Tribe, Navajo Nation, Utah Navajo Commission, Southern Ute Tribe, Ute Mountain Ute, White Mesa Ute, Kaibab Paiute Tribe, and Zuni Pueblo. In addition BLM met with the Paiute Indian Tribe of Utah (PITU) on September 5th 2013, the Navajo Nation on November 6, 2013, and the Hopi Tribe on November 20, 2013. PITU and the Hopi identified cultural and religious concerns with the parcels mentioned and addressed in the Cultural Resources section of this checklist. BLM has made alterations to the leasing of those parcels as a result and will consult with PITU on the alterations. Correspondence is summarized in the Chapter 5 consultation table. This correspondence is part of the record. Additional consultation would be initiated at the APD stage.	M. Jared Lundell	10-30-13
NI	Paleontology	The majority of proposed lease units occur on BLM lands with PFYC Classes II-IV fossil potential. Portions of lease units 003, 004, 005, 006, 015, 016, 017 and 053 include PFYC Class V, the highest fossil potential. Lease notice UT-LN-72 is applied to these parcels. Field surveys of PFYC V will be necessary if these parcels are leased and exploration or development activities are proposed to occur on PFYC V land.	J.Manning	2.4.2014
NI	Rangeland Health Standards & Guidelines	Leasing of these parcels would not impact Rangeland Health Standards. However, there is an inherent expectation that oil or gas activity could occur on any or all of the leased parcels. Any activity that involves surface disturbance or direct resource impacts would have to be authorized as a	Burke Williams	8-23-13

Determi-nation	Resource	Rationale for Determination	Signature	Date
		new project through future NEPA analysis, on a case-by-case basis. It would be expected that reclamation procedures would be required to ensure impacts to Rangeland Health Standards are minimized. The Gold Book standards also provide mechanisms to achieve Rangeland Health. These include weed control, siting considerations (e.g. well pad, contouring, road alignment), and re-vegetation. Design features necessary for the protection of water quality, soils, vegetation, threatened & endangered species habitat and other ecological features (rangeland health components) are incorporated. Refer also to the corresponding discussion in this checklist. Given the degree of anticipated exploration and application of SOPs, BMPs and design features applied at the APD stage as conditions of approval it is concluded that rangeland health standards would be met.		
NI	Recreation	Dispersed recreation in the identified parcels may be temporarily displaced, however not significantly impacted in the long term. There are no Special Recreation Management Areas (SRMA) within the proposed action units, however there are developed recreation areas within the identified parcels. A portion (~50 acres) of parcel UT0514-023 is located within the Glenwood Play Area, a 1,000 acre area which is open for community based recreation and OHV uses. This area was identified as open to oil and gas leasing in the Richfield RMP. Leasing parcels that include dispersed recreation use or recreation designations would impact recreation if not adequately addressed. Impacts on recreation by oil and gas leasing, exploration, and development would vary and need to be evaluated on a case by case basis in additional NEPA and when an APD is filed.	Jennifer Evans	9.4.2013
PI	Socio-Economics	Drilling and exploration wells could impact the local social structure and economy. For the short-term, land surveyors, landsmen, construction crews, and drilling crews would be involved during the drilling phase. Construction could take 10 to 20 days and drilling operations are expected to take about 20 to 60 days. This activity would lead to work crews lodging in local facilities with subsequent of expenditures in local markets. If the well is producible in paying quantities, the local social structure and economy could experience long-term	Stan Andersen	2.4.2014

Determi-nation	Resource	Rationale for Determination	Signature	Date
		impacts. These impacts could result in beneficial economic development, a need for additional infrastructure to provide goods and services to work forces, and possible changes to the economic and social base of the local community. Production could lead to additional exploration and development, increased oil and gas activities, additional employment, and royalties. Long term impacts could be in the range of 10-40 years.		
NI	Soils / Watersheds	Leasing would not have an impact on these resources; however there is a possibility that exploration/development could occur in the future. If exploration/development is proposed these actions could have impacts to soils and watersheds, these actions would be analyzed in separate NEPA documents at the time of the proposal. SOPs, BMPs and site specific design features including reclamation would be applied at the APD stage as COAs to mitigate soil disturbing actions on soils and watersheds. The application of stipulation UT-S-102 is warranted on all parcels.	Brant Hallows	10/29/13
NI	Utah Sensitive Plant and Animal Species other than FWS candidate or listed species	Habitat for 2 sensitive plant species (Jones Townsendia and Wards Penstemon) is found within parcels 006, 008, 009, 023, 035, 037, 038, 053. Application of Lease Notice UT-LN-49 is warranted on these parcels. Habitat for the sensitive Burrowing Owl is found within parcels 001, 002, 003, 004. 005, and 006. Application of lease notice UT-LN-49 is warranted on these parcels. Habitat for the sensitive Ferruginous Hawk is found within all 54 parcels. Application of lease notice UT-LN-49 is warranted on all parcels. Golden Eagle habitat occurs on all 54 parcels and lease notice UT-LN-40 is warranted on all parcels. Washington Office BLM lease stipulation as directed by WO IM No. 2002-174 would apply to all parcels. The Utah BLM State Office has determined that Section 7 consultation with the U.S. Fish and Wildlife Service (FWS) has been completed for all lease sales as follows: In October, 2008, a Biological opinion from the FWS was a portion of the approved RMP. BLM and FWS personnel completed work on set of lease notices for listed species that are to be attached to oil and gas leases	Larry Greenwood	9-16-13

Determi-nation	Resource	Rationale for Determination	Signature	Date
		offered in the State. The notices contain current avoidance and minimization measures that if followed could reduce the scope of Section 7 consultation at the permit stage. FWS responded with a memorandum which basically stated the following: "We concur that the sale of oil and gas lease parcels, with the species-specific lease notices, results in a "not likely to adversely affect" determination." The State Office will send the findings of this report to the Utah Ecological Services Field Office in Salt Lake City reporting any threatened and endangered species found on the parcels and all applicable lease notices in order to complete informal consultation for this lease sale. Coordination with USFWS		
NI	Threatened, Endangered or Candidate Plant Species	Habitat for the threatened Last Chance Townsendia occurs on Parcels 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 132, 133, 135 & 136. Stipulation UT-S-310 is warranted on these parcels.	Larry Greenwood	2.4.2014
NI	Threatened, Endangered or Candidate Animal Species	The UDWR has identified Sage Grouse Management Areas (SGMA) in their Conservation Plan released February 14, 2013. Some of the proposed parcels fall within the Parker Mountain-Emery SGMA as opportunity areas. These areas currently do not contribute to the life cycle of sage grouse. These opportunity areas are areas that are adjacent to sage grouse habitat that could be transformed into habitat or non-habitat based upon natural events or management choices. This was verified on the parcel site visits, it is also concluded by the BLM that sage grouse have not utilized this area and BLM does not consider the area to be habitat. Historic unoccupied habitat for Utah prairie dogs is found in parcels 132 and 135. Stipulation UT-S-221 has been added to these parcels.	Larry Greenwood	2/4/2014
NI	Vegetation	A relict plant community occurs within the Old Woman Front ACEC in parcel 118 (stipulation UT-S-344 is attached). SOPs, BMPs and site specific design features applied at the APD stage including reclamation, as COA would address soil resource issues not already analyzed in the FEIS/PRMP. Leasing fluid minerals would have little or no impact on the vegetative resource of these parcels. The impact would happen if and when actual drilling etc. occurs on the parcel. If drilling is proposed, then the appropriate NEPA and its	Larry Greenwood	2.4.2014

Determi-nation	Resource	Rationale for Determination	Signature	Date
		associated checklist will address impacts. If an Application to Drill Permit (APD) is received Best Management Practices (BMPs) and site specific design features to minimize disturbance to vegetation would be applied as Conditions of Approval.		
NI	Visual Resources	The majority of the 54 identified parcels in the proposed action fall into VRM classes IV and III, with some parcels including VRM class II. Parcels 125, 126, 127, 128, 129, and 130 contain VRM II and stipulation UT-S-161 would be attached to these parcels. Objectives for Class IV are to provide for management activities that require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repetition of the basic elements. Objective for Class III are to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape. Objectives for Class II are to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Visual impacts will be evaluated on a case by case basis in additional NEPA if an APD is filed and mitigation measures to mitigate impacts to visual resources to the field office will be implemented.	Jennifer Evans	2.4.2014
NI	Wastes (hazardous or solid)	There are currently no known waste issues associated with the proposed lease areas. If development of roads or well pads occur, potential release from equipment could be possible. State and Federal regulations would govern the use, storage	Randy Peterson	2.4.2014

Determi-nation	Resource	Rationale for Determination	Signature	Date
		and disposal of any products that could potentially impact persons or environment. Reporting and mitigation efforts would be required should such an event occur.		
NI	Water Resources/ Quality (drinking/surface/ ground)	The lease parcels with split estate ownership may have water wells that supply dwellings with drinking water. Modifications to a surface use plan of operations may be required at the APD stage in order to prevent water quality degradation. SOPs required by regulation and design features contained in an approved APD would be sufficient to isolate and protect all usable ground or surface water sources. The SOPs include the requirements for disposal of produced water contained in Onshore Oil and Gas Order (OOGO) No. 7 and the requirements for drilling operations contained in OOGO No. 2. Potential fresh water aquifers would be cased and cemented. The casing would be pressure tested to ensure integrity prior to drilling out the surface casing shoe plug. Potential impacts would be addressed and a design feature would be included prior to APD approval. Standard protocols would minimize possibility of releases (cased drill holes, no surface disturbance or occupancy would be maintained within 330 feet of any natural springs, new disturbance will be not be allowed in areas equal to the 100-year floodplain or 100 meters on either side of the center line of any stream, stream reach, or riparian area). Lease notice UT-LN-91 will be applied to all split estate parcels as well as parcels 003, 005, 006, 011, 012, 013, 023, 035 and 053 as identified in section 1.2.	Phil Zieg	2/4/14
NI	Wetlands/Riparia n Zones	Parcels 006, 008, 009, 011, 012, 034, 039, 127, and 129 have riparian zones within them. These parcels should have the Lease Stipulation UT-S-121. No surface disturbance and/or occupancy within buffer zones around natural springs. Base the size of the buffer on hydrological, riparian, and other factors necessary to protect the water quality of the springs. If these factors cannot be determined, maintain a 330-foot buffer zone from outer edge.	Larry Greenwood	9-16-13
NP	Wild and Scenic Rivers	The Richfield Field Office RMP 2008 was reviewed. There are no Wild and Scenic Rivers within the proposed action parcels.	Jennifer Evans	9.4.2013
NP	Wilderness/WSA	The Richfield Field Office RMP 2008 was reviewed. There are no Wilderness areas or	Jennifer Evans	9.4.2013

Determi-nation	Resource	Rationale for Determination	Signature	Date
		Wilderness Study Areas within the proposed action parcels.		
NP	Wild Horses and Burros	These areas are not included in any herd management area. No horses or burros are present.	Chris Colton	9/18/13
NI	Woodland / Forestry	Woodland production or restriction zones are or are not present. Leasing fluid minerals would have little or no impact on the Woodland/Forestry products. The impact would happen if and when actual drilling etc. occurs on the parcel. If drilling is proposed, then the appropriate NEPA and its associated checklist will address impacts. If an Application to Drill Permit (APD) is received Best Management Practices (BMPs) and site specific design features to minimize disturbance to vegetation would be applied as Conditions of Approval.	Bob Bate	10/25/13
NI	Greenhouse Gas Emissions / Climate Change	In addition to the air quality information contained within the governing LUP, new information about greenhouse gases (GHGs) and their effects on national and global climate conditions has emerged since LUP was prepared. Without additional meteorological monitoring and modeling systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions; what is known is that increasing concentrations of GHGs are likely to accelerate the rate of climate change. Determining GHG emissions, their relationship to global climatic patterns, and the resulting impacts is an ongoing scientific process. The BLM does not have the ability to associate a BLM action's contribution to climate change with impacts in any particular area. The technology to be able to do so is not yet available. The inconsistency in results of scientific models used to predict climate change at the global scale coupled with the lack of scientific models designed to predict climate change on regional or local scales, limits the ability to quantify potential future impacts of decisions made at this level and determining the significance of any discrete amount of GHG emissions is beyond the limits of existing science. When further information on the impacts to climate change is known, such information would be incorporated into the BLM's planning and NEPA documents as appropriate. It is currently not feasible to know with certainty the net impacts from leasing and any potential exploration on climate. While BLM actions may	Leonard Herr	9/20/2013

Determi-nation	Resource	Rationale for Determination	Signature	Date
		contribute to the climate change phenomenon, the specific effects of those actions on global climate are speculative given the current state of the science. Leasing the subject parcels would have no direct impacts on climate as a result of GHG emissions. There is an assumption; however that leasing the parcels would lead to some type of exploration that would have indirect effects on global climate through GHG emissions. However, those effects on global climate change cannot be determined. It is unknown whether the petroleum resources specific to these parcels are gas or oil or a combination thereof. Since these types of data as well as other data are unavailable at this time, it is also unreasonable to quantify GHG emission levels.		
NP	Non-WSA Lands with Wilderness Characteristics	New wilderness characteristic submissions from the public have not been received for any areas within the subject parcels. The subject parcels, which are proposed for lease in Appendix A, are not within any areas designated by the RMP/EIS to be managed for their wilderness characteristics. Furthermore, past wilderness character inventories have not identified lands with wilderness characteristics within the subject parcels in Appendix A. The wilderness character inventory in 1999 determined that all or portions of parcels 109, 110, 128, 131, 132, 133, 135, and 136 proposed for lease in the draft version of this document possessed wilderness character; however the RMP decision (page 32) determined that these areas with wilderness character would not be managed to preserve wilderness characteristics (Richfield RMP map 2). The portions of parcels 109, 110, 111, 114, 128, 131, 132, 133, 135 and 136 determined to possess wilderness characteristics have been deferred from the May 2014 lease sale for the reasons described in Appendix D – Deferred Parcel List.	Jen Evans	2.4.2014

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator	/s/Joe Manning	2-14-2014	For S. Andersen
Authorized Officer	/s/Wayne Wetzel	2-14-2014	

APPENDIX D, DEFFERRED PARCEL LIST

DEFFERRED PARCEL LIST

Date Nominated	Parcel Number	Legal Description	Acres	Reason Tract Postponed	Land Use Plan
July 1, 2013	UT0514-007 Sevier County, Utah Richfield Field Office	T. 22 S., R. 1 W., Salt Lake Sec. 6: Lots 8-14, NESW. Sec. 10: SWSW, SE	559.16	This parcel is deferred because it is adjacent to the town of Aurora, the town has a Recreation and Public Purposes (R&PP) permit for a city park within the parcel. Also, three hundred acres of the parcel are designated as an open area for OHV's, these uses aren't compatible with oil and gas leasing/development.	Richfield RMP
July 1, 2013	UT0514-025 Washington County, Utah St. George Field Office	T. 41 S., R. 12 W., Salt Lake Sec. 11: All; Sec. 12: Lots 1-8, SENE, NESE, S2SE; Sec. 13: Lots 1, 2, NE, NWNW, N2SW, SESW, N2SE.	1,607.74	The 1999 St. George Field Office RMP does not provide adequate analysis for oil and gas leasing for this parcel.	St. George RMP
July 1, 2013	UT0514-026 Washington County, Utah St. George Field Office	T. 41 S., R. 12 W., Salt Lake Sec. 14: N2, SW, N2SE, SWSE; Sec. 15: All; Sec. 22: NWNE, N2NW, SENW; Sec. 23: NWNE, N2NW.	1,522.40	The 1999 St. George Field Office RMP does not provide adequate analysis for oil and gas leasing for this parcel.	St. George RMP
July 1, 2013	UT0514-028 Washington County, Utah St. George Field Office	T. 40 S., R. 13 W., Salt Lake Sec. 14: All; Sec. 15: E2; Sec. 22: N2, N2S2, SESE.	1,480.00	The 1999 St. George Field Office RMP does not provide adequate analysis for oil and gas leasing for this parcel.	St. George RMP
July 1, 2013	UT0514-031 Washington County, Utah St. George Field Office	T. 40 S., R. 13 W., Salt Lake Sec. 27: SENE, SWSW, N2SE, SESE; Sec. 28: Lots 1-5, N2NE, SWNE, W2, NWSE; Sec. 29: NESE, S2SE; Sec. 31: Lots 1-4, NE, E2NW, NESW.	1,403.97	The 1999 St. George Field Office RMP does not provide adequate analysis for oil and gas leasing for this parcel.	St. George RMP

July 1, 2013	UT0514-109 Sevier County, Utah Richfield Field Office	T. 21 S., R. 5 E., Salt Lake Secs. 35 and 36: All. 1,266.56 Acres	1,266.56	This parcel contains lands determined to possess wilderness characteristics, which the Richfield RMP determined would not be managed for the preservation of those wilderness characteristics. However, the parcel has been deferred from the May 2014 lease sale in order to allow sufficient time to verify and appropriately document, in an oil and gas lease sale NEPA document, the analysis of wilderness values contained in the Richfield RMP..	Richfield RMP
July 1, 2013	UT0514-110 T. 22 S., R. 5 E., Sevier County, Utah Richfield Field Office	T. 22 S., R. 5 E., Salt Lake Secs. 1, 11 and 12: All.	1,920.80	This parcel contains lands determined to possess wilderness characteristics, which the Richfield RMP determined would not be managed for the preservation of those wilderness characteristics. However, the parcel has been deferred from the May 2014 lease sale in order to allow sufficient time to verify and appropriately document, in an oil and gas lease sale NEPA document, the analysis of wilderness values contained in the Richfield RMP.	Richfield RMP
July 1, 2013	UT0514-111 Sevier County, Utah Richfield Field Office	T. 22 S., R. 5 E., Salt Lake Secs. 3 and 10: All; Sec. 15: N2, SW, N2SE.	1844.32	This parcel is being deferred for additional analysis regarding the potential impacts of oil and gas leasing and development on cultural resources and water quality in the Quitchupah Creek area.	Richfield RMP
July 1, 2013	UT0514-114 Sevier County, Utah Richfield Field Office	T. 22 S., R. 5 E., Salt Lake Sec. 13: N2, N2SW, SESW, SE; Sec. 14: N2, N2S2; Sec. 24: N2NE, SENE, NENW.	1240.00	This parcel is being deferred for additional analysis regarding the potential impacts of oil and gas leasing and development on cultural resources and water quality in the Quitchupah Creek area.	Richfield RMP
July 1, 2013	UT0514-116 Sevier County, Utah Richfield Field Office	T. 22 S., R. 5 E., Salt Lake Sec. 20: N2; Secs. 21 and 22: All; Sec. 28: NE; Protraction Block 43: unsurveyed.	2246.00	This parcel is being deferred for additional analysis regarding the potential impacts of oil and gas leasing and development on cultural resources and water quality in the Quitchupah Creek area.	Richfield RMP
July 1, 2013	UT0514-117 Sevier County, Utah Richfield Field Office	T. 22 S., R. 5 E., Salt Lake Sec. 23: S2NE, W2, SE; Sec. 24: S2S2; Sec. 25: E2NE, W2, N2SE, SWSE; Sec. 26: All.	1880.00	This parcel is being deferred for additional analysis regarding the potential impacts of oil and gas leasing and development on cultural resources and water quality in the Quitchupah Creek area.	Richfield RMP
July 1, 2013	UT0514-128 T. 24 S., R. 5 E.,	T. 24 S., R. 5 E., Salt Lake	854.00	This parcel contains lands determined to possess	Richfield RMP

	Sevier County, Utah Richfield Field Office	Sec. 1: All.		wilderness characteristics, which the Richfield RMP determined would not be managed for the preservation of those wilderness characteristics. However, the portions of the parcel determined to contain wilderness characteristics have been deferred from the May 2014 lease sale in order to allow sufficient time to verify and appropriately document, in an oil and gas lease sale NEPA document, the analysis of wilderness values contained in the Richfield RMP.	
July 1, 2013	UT0514-131 Sevier County, Utah Richfield Field Office	T. 24 S., R. 5 E., Salt Lake Secs. 11, 12, 13 and 14: All	2,560.00	This parcel contains lands determined to possess wilderness characteristics, which the Richfield RMP determined would not be managed for the preservation of those wilderness characteristics. However, the parcel has been deferred from the May 2014 lease sale in order to allow sufficient time to verify and appropriately document, in an oil and gas lease sale NEPA document, the analysis of wilderness values contained in the Richfield RMP.	Richfield RMP
July 1, 2013	UT0514-132 T. 24 S., R. 5 E., Sevier County, Utah Richfield Field Office	T. 24 S., R. 5 E., Salt Lake Secs. 15: All.	640.00	This parcel contains lands determined to possess wilderness characteristics, which the Richfield RMP determined would not be managed for the preservation of those wilderness characteristics. However, the portions of the parcel determined to contain wilderness characteristics have been deferred from the May 2014 lease sale in order to allow sufficient time to verify and appropriately document, in an oil and gas lease sale NEPA document, the analysis of wilderness values contained in the Richfield RMP.	Richfield RMP
July 1, 2013	UT0514-133 Sevier County, Utah Richfield Field Office	T. 24 S., R. 5 E., Salt Lake Sec. 20: Lots 1-2; S2NE, SE; Sec 21 and 22: All.	1,570.22	This parcel contains lands determined to possess wilderness characteristics, which the Richfield RMP determined would not be managed for the preservation of those wilderness characteristics. However, the portions of the parcel determined to contain wilderness characteristics have been deferred from the May 2014 lease sale in order to allow sufficient time to verify and	Richfield RMP

				appropriately document, in an oil and gas lease sale NEPA document, the analysis of wilderness values contained in the Richfield RMP.	
July 1, 2013	UT0514-134 Sevier County, Utah Richfield Field Office	T. 24 S., R. 5 E., Salt Lake Secs. 23, 24, 25 and 26: All.	2,518.02	This parcel contains lands determined to possess wilderness characteristics, which the Richfield RMP determined would not be managed for the preservation of those wilderness characteristics. However, the parcel has been deferred from the May 2014 lease sale in order to allow sufficient time to verify and appropriately document, in an oil and gas lease sale NEPA document, the analysis of wilderness values contained in the Richfield RMP..	Richfield RMP
July 1, 2013	UT0514-135 Sevier County, Utah Richfield Field Office	T. 24 S., R. 5 E., Salt Lake Secs. 27 and 28: All; Sec. 29: E2NE, NWNE, W2SW; Sec. 30: NESE, S2SE.	1,600.00	This parcel contains lands determined to possess wilderness characteristics, which the Richfield RMP determined would not be managed for the preservation of those wilderness characteristics. However, the portions of the parcel determined to contain wilderness characteristics have been deferred from the May 2014 lease sale in order to allow sufficient time to verify and appropriately document, in an oil and gas lease sale NEPA document, the analysis of wilderness values contained in the Richfield RMP.	Richfield RMP
July 1, 2013	UT0514-136 Sevier County, Utah Richfield Field Office	T. 24 S., R. 5 E., Salt Lake Secs. 31 and 35: All.	1,175.16	This parcel contains lands determined to possess wilderness characteristics, which the Richfield RMP determined would not be managed for the preservation of those wilderness characteristics. However, the portions of the parcel determined to contain wilderness characteristics have been deferred from the May 2014 lease sale in order to allow sufficient time to verify and appropriately document, in an oil and gas lease sale NEPA document, the analysis of wilderness values contained in the Richfield RMP.	Richfield RMP
July 1, 2013	UT0514-139 Sanpete County, Utah Richfield Field Office U.S. Interest 50%	T. 14 S., R. 4 E., Salt Lake Sec. 2: Portions of Lots 2 and 3.	2.00	Size of the parcel and proximity to incorporated town of Fairview makes the parcel undesirable for leasing.	Richfield RMP
July 1, 2013	UT0514-140	T. 14 S., R. 4 E.,	50.00	Size of the parcel, residential	Richfield

	Sanpete County, Utah Richfield Field Office U.S. Interest 50%	Salt Lake Sec. 26: NWSW; Sec. 35: NWSWSW.		infrastructure, and proximity to incorporated town of Mt. Pleasant makes the parcel undesirable for leasing.	RMP

APPENDIX E, RESPONSE TO COMMENTS

Copies of comment letters are available at the Richfield Field Office for review.

Terence Parker Haley - Comment1: "Without accurate measurement of dust particulate levels and air studies to determine the impact of massive scale surface disruption from the thousands of acres that could be potentially disrupted through the addition of hundreds of new wells for the May 2014 auction sites, the BLM cannot assess a regional impact on air quality and therefore should suspend issuance of leases until this question can be answered, accurately."

BLM Response to Comment 1: *A detailed analysis for air quality can be found within this Environmental Assessment (EA). The EA analyzes one well per parcel which is 54 wells and 648 acres of disturbance, not thousands of acres and hundreds of wells as claimed.*

Terence Parker Haley - Comment 2: "The EA report states that there is a "low potential to nest" for burrowing owls due to absence of prairie dog colonies on lease sites proposed for the May 2014 auction. This is not an accurate, or straightforward, assessment of burrowing owl habitat and oil and gas operations on the lease sites will destroy potential habitat for a threatened species. It is well known that prairie dog control programs, illegal killing and poisoning, and lack of management have lead to prairie dog colony decline across historical habitat ranges. Re-introduction of prairie dog colonies and even artificial burrows have been shown to provide suitable nesting sites for burrowing owls in their habitat. These lease areas are suitable habitat for burrowing owls that could lead to restoration of burrowing owl populations with good wildlife management actions and policies. It is irresponsible to blanket the lease area EA evaluations as no impact for burrowing owls. It could very easily go the other way for the burrowing owl if was a priority."

BLM Response to Comment 2: *Nowhere in this EA does it state "there is a "low potential to nest" for burrowing owls due to absence of prairie dog colonies on lease sites proposed for the May 2014 auction." On the contrary, wildlife biologists for the BLM and the Utah Division of Wildlife Resources have identified habitat for burrowing owl (a sensitive not a threatened species) on parcels 001, 002, 003, 004. 005 and 006. A lease notice (UT-LN-49) has been attached to these parcels to inform a potential lessee of the presence of this species or habitat. Re-introduction of prairie dogs is outside the scope of the proposed action.*

Roseann Dudrick - Comment 3: "As you are supposed to be stewards of our public lands, I do not recall approving or a majority citizen approval of the lease or sale of our public lands. I do know we have demanded the return of our wild horses to our public lands. You cannot sell or lease our public lands on our behalf without a majority approval."

BLM Response to Comment 3: *BLM offers parcels to be leased as directed by the Minerals Leasing Act section 226(b)(1)(A), and 43 CFR 3120.1-2(a) when lands have been determined to be eligible and open to leasing.*

Kristen Hughes - Comment 4: "Please don't allow this to happen. This is beautiful country that doesn't deserve the scars from oil and gas development."

BLM Response to Comment 4: *Oil and gas leasing and development is a valid use of public lands. When an Application for Permit to Drill (APD) is received various mitigation measures and best management practices are attached to the permit as conditions of approval to lessen the impacts of oil and gas exploration/development.*

Ian Wade Comment - 5: "I am opposed to oil and gas leases being offered on Wilderness quality lands in Color Country District."

BLM Response to Comment 5: *There are no Wilderness areas or Wilderness Study Areas within the proposed action parcels. None of the parcels proposed for leasing in this EA are within any areas designated by the RMP/EIS to be managed for their wilderness characteristics.*

Dain Leroy Christensen - Comment 6: "I oppose all these lease sales and would strongly advice against them seems how they are a final land use practice. I feel the Environmental analysis's and impact statements are inadequately conducted. It is in the interest of the youth of Utah and the rest of Utah's citizens that these parcels of land be withdrawn from leasing and alternative forms of energy are explored. The leading reasons to leave possible fossil fuel development in the ground are 1) Utah's air quality and pollution affecting its citizens along the Wasatch front. 2) Mitigating the long lasting and damaging affects of climate change. I hope you find these words with meaning instead of disregarding the health and wellness of future generations."

BLM Response to Comment 6: *A detailed analysis for air quality can be found within this Environmental Assessment (EA).*

WildEarth Guardians, Wild Utah Project and Rocky Mountain Wild - Comment 7: "Parcels 39, 59, 109, and 111 are at least partially within greater sage grouse Preliminary Priority Habitats. All or portions of Parcels 12, 13, 43, 47, 56, 59, 60, 61, 109, 110, 111, 132, 135, 136, and 138, are immediately adjacent to or within 3 miles of greater sage grouse Preliminary Priority Habitats. These parcels should be deferred from the lease auction or at the very least have No Surface Occupancy stipulations applied within 1.9 miles of occupied habitat and timing limitation stipulations applied within 3 miles of occupied habitat during the breeding, nesting, and wintering seasons depending on the types of habitat present to maintain the range of implementable alternatives in the Utah Greater Sage-grouse RMP Amendment EIS."

BLM Response to Comment 7: *As stated in this EA sage grouse habitat is not present. The UDWR has identified Sage Grouse Management Areas (SGMA) in their Conservation Plan released February 14, 2013. Some of the proposed parcels fall within the Parker Mountain-Emery SGMA as opportunity areas. These areas currently do not contribute to the life cycle of sage grouse. These opportunity areas are areas that are adjacent to sage grouse habitat that could be transformed into habitat or non-habitat based upon natural events or management choices (see letter from State of Utah January 5, 2013). The absence of habitat was verified on the parcel site visits, the BLM does not consider the areas to be habitat.*

WildEarth Guardians, Wild Utah Project and Rocky Mountain Wild - Comment 8: "According to BLM, "Crucial deer and/or elk winter/spring range occurs on the following parcels: 001, 002, 003, 008, 009, 010, 011, 012, 013, 023, 034, 035, 038, 039, 043, 047, 053, 056, 057, 058, 059, 060, 061, 064, 080, 089, 092, 109, 110, 111, 114, 116, 117, 118, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 138, & 141." EA at 79. Big game crucial ranges should be deferred in all cases where an RMP revision is underway."

BLM Response to Comment 8: *Richfield RMP was approved in 2008, no RMP revision is underway, a deferral of parcels is not warranted.*

Utah Rock Art Research Association - Comment 9: "The Quitchupah Creek drainage contains prehistoric rock art which indicates the presence of archaic hunters over three thousand years ago, Fremont people who subsisted on farming, hunting and gathering and the Paiute people who

have summered in the Wasatch Plateau area for hundreds of years. URARA has participated in past BLM considerations specifically for the use of the Quitchupah Creek road for an energy transportation corridor. We have opposed industrial use of this culturally rich drainage. We are also aware of the significance of the Quitchupah Creek drainage to Paiute tribal members and support their efforts to protect their sacred sites."

BLM Response to Comment 9: *After further review and consultation with the Hopi Tribe the BLM has made the decision to defer all of parcels 111, 114, 116, and 117 for additional analysis regarding the potential impacts of oil and gas leasing and development on cultural resources and water quality in the Quitchupah Creek area.*

Utah Rock Art Research Association - Comment 10: "The late R.V. Jones and D.E. Goodfellow, residents of the Price area, walked the major Wasatch Plateau drainages and published their findings in a series of short books focused on prehistoric rock art. They discovered many rock art sites in the San Raphael River, Ferron River, Muddy Creek, Quitchupah Creek and their tributaries, Ivie Creek and Rochester Creek. They confirmed heavy prehistoric summer use of the Wasatch Plateau area evidenced by an abundance of rock art in the drainages of creeks and rivers. Parcels 125, 126, 127 and 129 include Ivie Creek. The "Old Woman Front ACEC" in located in the Ivie Creek drainage. We request a deferment of those parcels until a further cultural resource review identifies the location and concentration of rock art and archeology on those parcels."

BLM Response to Comment 10: *BLM review of the Ivie Creek drainage revealed cultural resource inventories along most of the drainage in parcels 125, 126, 127, and 129. One rock art site is recorded within parcel 127. Parcel 127 has a NSO stipulation that includes a 1/4 mile buffer for sites where setting directly contributes to the eligibility of the property. All leases also include a stipulation informing potential lessees of the possibility of additional properties eligible to the National Register and modifications that BLM may impose to preserve any located historic properties. Also, the Old Woman Front ACEC was designated an ACEC for relict vegetation and is covered by a NSO stipulation.*

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 11: "The EA assumes that the issuance of these leases will only result in the development of one well pad per lease parcel. EA at 8. Because of this, it ignores a myriad of impacts that could result from higher levels of development or development more highly concentrated in one area. The EA makes no commitment to limit development to these levels and state law permits a much higher density of development. The BLM must evaluate the potential impacts of larger scale development on these parcels unless it is able to attach stipulations limiting development to only one pad per parcel."

BLM Response to Comment 11: *As it states in the EA "Leasing is an administrative action that affects economic conditions but does not directly cause environmental consequences. However, leasing is considered to be an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a NSO stipulation. Potential oil and gas exploration and production activities, committed to in a lease sale, could impact other resources and uses in the planning area. Direct, indirect, or cumulative effects to resources and uses could result from as yet undetermined and uncertain future levels of lease exploration or development.*

Although at this time it is unknown when, where, or if future well sites or roads might be proposed on any leased parcel, should a lease be issued, site specific analysis of individual wells or roads would occur when a lease holder submits an Application for Permit to Drill (APD). For the purposes of this analysis, the BLM assumed that one well pad with access road would be constructed on each lease subject to the terms, conditions, and stipulations of the lease."

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 12: "Lease Parcels 116 and 118 overlap with the Old Woman Front ACEC. Compare EA at 76-77, Map 2 of 4, with Richfield Field Office Record of Decision and Approved Resource Management Plan Map 28 (2008) (ROD). In that ACEC designation, BLM stated that the entire ACEC would be "open to oil and gas leasing with major constraints, such as [no surface occupancy]." ROD at 149. The Richfield RMP designated this area as NSO. See ROD at 136, Map 23; EA at 77. The EA acknowledges this. See EA at 77. However, in spite of this the lease notices and stipulations for these two parcels do not include any NSO limitations."

BLM Response to Comment 12: *Statement is incorrect, NSO stipulation UT-S-344 is added to 118. EA at 50. A decision to defer parcel 116 has been made.*

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 13: "BLM must update its visual resource analysis in this EA as the use of outdated information does not sufficiently protect areas found to possess greater visual resources than previously thought. In Southern Utah Wilderness Alliance v. Norton, the court held that BLM violated NEPA "by failing to consider significant new information about wilderness values and characteristics" on sixteen parcels which BLM was preparing to lease for oil and gas development. 457 F. Supp. 2d 1253, 1269 (D. Utah 2006). This same reasoning prevents the BLM from relying outdated and inadequate visual resource information."

BLM Response to Comment 13: *The visual resource information used in the analysis of this EA was taken from the Richfield Field Office 2008 approved Resource Management Plan (RMP) under visual resource management (VRM) decisions. This document provides guidance for the management of BLM lands in the Richfield Field Office.*

The visual resource inventory for the Richfield Field Office was updated in November 2011, however since VRI classes are informational in nature and do not establish management direction, VRM classes are established to reflect the resource-allocation decisions made in the RMP.

The BLM developed the VRM system to identify and evaluate an area's scenic values to determine the appropriate management objectives for those values. The visual resource inventory (VRI) process establishes VRI classes, which are used to assess visual values for resource management plans (RMPs). Visual management objectives are developed through the BLM's resource management planning process and reflect the resource-allocation decisions made in the RMP. According to BLM Manual H-1601-1, Land Use Planning, implementation decisions must be designed to achieve VRM objectives within each VRM class. VRM classes may reflect VRI classes, but they may not necessarily do so since management objectives for other resources as determined in the planning process may require different visual management needs.

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 14: "The EA fails to discuss potential impacts to a host of TES species as well as wildlife. While the EA does acknowledge that some TES species and wildlife may be located within parcels offered here it has completely failed to analyze potential impacts to those species. Instead, the EA indicates that stipulations will be implemented on various parcels to help address potential concerns regarding TES species and wildlife. But the EA does not discuss those concerns and does not analyze them. NEPA requires that the agency analyze these impacts and disclose them to the public, include ways in which mitigation will help to address those impacts. It may not circumvent this requirement simply by stating that a stipulation will be added for a TES or wildlife species."

BLM Response to Comment 14: *Utah prairie dogs have historic unoccupied habitat within parcels 132 and 135, stipulation UT-S-221 has been added to these parcels. Utah sensitive plant and animal species were reviewed in the ID Team Checklist. It was determined that this resource was present, but not affected to a degree that detailed analysis is required. A lease notice (UT-LN-49) has been attached to parcels containing habitat to inform a potential lessee of the presence of habitat for these species. The act of leasing in a particular area does not ensure that impacts to any sensitive species will occur. It's not until the lease is actually developed that potential impacts to these species could occur. Until an APD is submitted to the BLM office and a wildlife survey is conducted, the direct, indirect, and cumulative impacts to any sensitive species are unknown. If any sensitive species are found, mitigation measures would be developed to reduce or eliminate impacts of oil and gas exploration/development.*

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 15: "Here, listed and sensitive species are likely to be harmed by this project. However, BLM has not discussed those impacts in the EA. It has not discussed them in the RMP either. For example, the BLM has completely ignored the potential impacts from leasing and subsequent development to the Utah prairie dog despite the overlap of habitat and an active colony affected by parcels 132 and 135. [See Rocky Mountain Wild, Map 10 (Dec. 23, 2013) (attached)]."

BLM Response to Comment 15: *Stipulation UT-S-221 has been added to parcels 132 and 135.*

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 16: "The EA does not discuss impacts to water quality from oil and gas leasing, and in particular, impacts to the Upper Quitchipah Creek, a waterway listed on Utah's 303(d) list of impaired waters for Benthic-Macroinvertebrate Bioassessments. Upper Quitchipah Creek passes immediately to the south of lease parcels 111 and 114 and to the north of 116 and 117. See EA at 72. The EA attaches Stipulation Notice UT-LN-91 (Water and Watershed Protection) to lease parcels 114 and 117 but not to parcels 111 and 116. See id. at 52 – 53. However, Stipulation Notice UT-LN-91 protects water quality only for "supply well[s]," not nearby waterways. See id. at 66 ("No surface use or otherwise disruptive activity allowed within 500 feet of a supply well in order to prevent water quality degradation.")."

BLM Response to Comment 16: *Any potential impacts to water quality to Upper Quitchupah Creek are removed as parcels 111, 114, 116, and 117 are being deferred.*

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 17: "The EA does not contain even cursory analysis for water quality impacts from oil and gas leasing and subsequent development. Air quality and socio-economic issues were the only substantive areas brought forward for analysis. See EA Chapters 3 and 4. Water resources/quality were determined to be present, but not affected to a degree that detailed analysis was required. See id. at 84 – 85. The Interdisciplinary Team Checklist – used by BLM to justify its lack of water resource/quality analysis – states that "Potential impacts [to water resources/quality] would be addressed and a design feature would be included utilizing IM No. UT 2010-055 prior to APD approval." EA at 85. This is problematic for at least two reasons. IM No. UT 2010-055 applies to the protection of only ground water and thus, fails to account for the other half of the water resources/quality problem. See Bureau of Land Management, Instruction Memorandum No. UT 2010-055, Protection of Ground Water Associated with Oil and Gas Leasing, Exploration and Development – Utah BLM (July 20, 2010). Secondly, IM No. UT 2010-055 expired on September 30, 2011, more than two years ago and cannot be used and/or relied on by BLM. See id. at 1. The EA's superficial citation to this Instruction Memorandum does not disclose to the public the full range of environmental effects to water resources/quality that might result from oil and gas leasing and development."

BLM Response to Comment 17: *Reference to IM UT2010-055 has been removed from the EA. As standard practice a BLM petroleum engineer and geologist will review each APD casing and cementing program to ensure all of BLM's requirements for groundwater protection are met. As stated in your comment water resources/quality were determined to be present, but not affected to a degree that detailed analysis was required. Also, see response to comment 18 regarding water quality.*

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 18: "The EA failed to consider whether oil and gas leasing and development might violate Utah water quality law including statutes and regulations."

BLM Response to Comment 18: *The EA supports Utah state water quality law by mitigating potential effects created by the proposed action. As stated in the proposed action Section 2.2.2 "All operations would be conducted following the "Gold Book", Surface Operating Standards for Oil and Gas Exploration and Development. The Gold Book was developed to assist operators by providing information on the requirements for conducting environmentally responsible oil and gas operations on federal lands. The Gold Book provides operators with a combination of guidance and standards for ensuring compliance with agency policies and operating requirements, such as those found at 43 CFR 3000 and 36 CFR 228 Subpart E; Onshore Oil and Gas Orders (Onshore Orders); and Notices to Lessees. Included in the Gold Book are environmental BMPs; these measures are designed to provide for safe and efficient operations while minimizing undesirable impacts to the environment." Stipulation UT-S-102 has been added to all parcels specifically for erosion control.*

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 19: "Although the EA discusses air quality related values (AQRVs) in national parks, it fails to discuss AQRVs in nearby Capitol Reef National Park, the closest national park to the leases being offered here. See EA at 15-16.Furthermore, the EA completely fails to analyze impacts to AQRVs as a result of leasing and development.

The EA failed to disclose or discuss the effects/visual impacts on visitors to Capitol Reef National Park (Park) and in particular, aesthetic (including natural sounds) and visual impacts from oil and gas leasing and development. See EA at 84 (Interdisciplinary Team Checklist discussing only the "objectives" for Class II, III, and VI, areas). The BLM should remove lease parcels 131, 134, 135, and 136 because they are located only a few miles to the north of the Park and activities in these areas could be seen and heard by visitors within the Park."

BLM Response to Comment 19: *VRM Class I was not discussed as there are not VRM class I areas within the proposed action area. VRM is class IV between parcels 135, and 136 with a section of VRM class II on the border of Capitol Reef National Park and BLM. After the section of class II on the border of the park and BLM, the remaining miles between the proposed action area and the park are all VRM class IV. Additionally, from highway 24 in Capitol Reef, the proposed action area is past the background and visible area (see VRI visibility analysis maps).*

The north border of Capitol Reef is approximately ten miles from the nearest parcels. There is no scientific data suggesting activities in the proposed action area could be seen or heard by visitors within the park, a minimum of about ten miles away. Additionally, visual resource analysis does not analyze sound potential. It is unlikely that any noise from oil and gas activity would be detectable from Capitol Reef NP.

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 20: "BLM relies on the RMP decision that the lands with wilderness characteristics covered by these leases would not be managed for natural areas and would be available for leasing. However, this is a NEPA document that requires analysis of impacts. Neither the RMP nor the EA analyze the impacts of oil and gas development on the wilderness characteristics of these lands. There needs to be a discussion as to how the leases and development would affect; size, naturalness, opportunity for solitude or primitive recreation and supplemental values."

BLM Response to Comment 20: *Impacts on uses as a result of focused management, such as the protection, preservation, and maintenance of non-WSA lands with wilderness characteristics, were disclosed in the PRMP/FEIS, and considered in conjunction with impacts to resource values. There are 78,600 acres within 12 areas that are carried forward for protection of their wilderness characteristics (BLM Natural Areas).Management prescriptions were developed to protect wilderness values, while allowing other uses, as appropriate.*

There were areas found to have wilderness characteristics during the inventory reviews that were not selected for management of those characteristics in the Approved RMP. The reasons for this decision were varied and complex. In most cases it was because those lands were found to have other important resources or resource uses that will conflict with protection, preservation, or maintenance of the wilderness characteristics. For example, some lands have existing leases that may be developed in the near future, or there may be mining claims with a potential development scenario. In other instances, even though no valid existing rights encumbered these lands, there was moderate to high potential for future oil and gas development. Impacts on existing and future rights-of-way, access to state lands, water developments, mineral and mining areas, and support facilities for grazing were considered. There were also conflicts identified with Wildland Urban Interface and fuels reduction for the protection of communities at risk. Due to these manageability issues and resource conflicts, these areas were more suitable for different management options. Other resource decisions will continue to provide some protection to these areas while allowing for flexibility. For example,

decisions for riparian protection, avoiding or reducing fragmentation of special status species habitat, VRM class restrictions and closing or limiting motorized use to designated routes on 99 percent of the RFO help facilitate protection of natural settings. The Approved RMP provides a balance in allowing for uses to occur while providing for protection of non-WSA lands with wilderness characteristics. (RMP 31) Also see response to comment 5.

The subject parcels, which are proposed for lease in Appendix A, do not contain any areas designated by the RMP/EIS to be managed for their wilderness characteristics. Past wilderness character inventories have not identified lands with wilderness characteristics within the subject parcels. Furthermore, new wilderness characteristic submissions from the public have not been received for any areas within the subject parcels. The wilderness character inventory in 1999 determined that all or portions of parcels 109, 110, 128, 131, 132, 133, 135, and 136 proposed for lease in the draft version of this document, which was posted for public review December 20, 2013 to January 27, 2014, possessed wilderness characteristics; however the RMP decision (page 32) determined that these areas with wilderness character would not be managed to preserve wilderness characteristics (Richfield RMP map 2). Furthermore, the portions of the parcels 109, 110, 128, 131, 132, 133, 135, and 136 determined to contain wilderness characteristics have been deferred from the May 2014 lease sale for the reasons described in Appendix D.

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 21: "The EA relies on the Richfield RMP for environmental analysis here. See, e.g., EA at 3-6. However, the Richfield RMP suffers from a number of significant flaws in terms of environmental analysis. Because of this, the EA does not comply with NEPA's hard look requirement.

Among other things, the Richfield RMP failed to consider a no leasing alternative—particularly for these areas. The Richfield RMP failed to consider the impacts to air quality and many other resources. SUWA hereby reincorporates its comments on the submitted on the Richfield RMP. See generally SUWA, Richfield RMP Protest (Sept. 8, 2008) (attached)."

BLM Response to Comment 21: *The Richfield Field Office is operating under the Richfield RMP that was approved in 2008 and will do so until a new RMP is approved or the current RMP is amended. All parcels analyzed in this EA have been designated as open to leasing in the Richfield RMP. BLM has previously responded to SUWA's comments on Richfield's RMP.*

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 22: "It is also critical that the BLM evaluate the potential contributions of the oil and gas development activities that would result from this leasing decision, along with all other cumulative impact activities in the Richfield Field Office, on soil disturbance which leads to early snowmelt in nearby mountains when transported in wind storms."

BLM Response to Comment 22: *Soil/Watershed resources were reviewed in the ID Team Checklist. It was determined that this resource was present, but not affected to a degree that detailed analysis is required. Also, see response to comment 18.*

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 23: "SUWA adopts the comments of the Utah Rock Art Research Association. SUWA also adopts the comments of the Hopi Tribe and requests that the BLM completely withdraw parcels 111, 114, 116, and 117 because of their high densities of cultural sites.2 As the Hopi discussed, there are fourteen parcels proposed for leasing in this sale that the BLM has never surveyed (nor

has any other entity surveyed these parcels). The BLM cannot make a determination whether leasing and subsequent development will result in any adverse effects. Thus, the BLM should withdraw those parcels or perform cultural surveys. Without doing so the BLM does not comply with the National Historic Preservation Act."

BLM Response to Comment 23: *After further review and consultation with the Hopi Tribe the BLM has made the decision to defer all of parcels 111, 114, 116, and 117 for additional analysis regarding the potential impacts of oil and gas leasing and development on cultural resources and water quality in the Quitchupah Creek area.*

In regards to the 14 parcels BLM made a determination of "No Adverse Effect" based on a Class I inventory of the area, consultation with the SHPO, and consultation with Native American Tribes. None of the consulting tribes informed BLM of any properties of religious or cultural significance in northern Sanpete County, where the 14 parcels are located. Additionally, BLM's Class I inventory identified steep slopes and low archaeological site densities in the region. The SHPO concurred with BLM's finding of "No adverse Effect". Finally, BLM will require Class III on-the-ground inventories for any development resulting from the proposed lease sale. Based on the findings of the Class I inventory, consultation, and the Class III inventory requirement for resulting O&G development the leasing of the parcels should not adversely affect National Register eligible properties.

Southern Utah Wilderness Alliance and Natural Resources Defense Council – Comment 24: "The EA fails to analyze the potential impacts, in terms of greenhouse gas emissions, from this proposed lease sale. This oversight is particularly glaring considering the fact that chapter three of the EA discusses greenhouse gas emissions as a potential issue associated with oil and gas leasing and development. See EA at 17-19."

BLM Response to Comment 24: *Greenhouse gases are discussed in conjunction with air quality in this EA in both chapter 3 and 4 and in the Interdisciplinary Checklist (Appendix D).*

WildEarth Guardians, Wild Utah Project and Rocky Mountain Wild - Comment 25: "The EA has a significant error that needs to be addressed. The EA contains the following statement: "Although once the lease has been issued, the lessee has the right to use as much of the leased land as necessary to explore for, drill for, extract, remove, and dispose of oil and gas deposits located under the leased lands unless it is leased under an NSO stipulation." EA at 4. The Mineral Leasing Act conveys no such rights. Under the Mineral Leasing Act, a lessee gains the right to explore and develop oil and gas resources on at least one point on the leashold, unless precluded through lease stipulations. In addition, the BLM has the right under federal law to impose additional restrictions in the form of Conditions of Approval not contained within the lease stipulations, during the construction and drilling permitting process. Under no conditions does a lesse have the right, expressed or implied, to "use as much leased land as necessary" to pursue oil and gas development on the leasehold. Please clarify this key legal point in future NEPA documentation for this lease sale."

BLM Response to Comment 25: *The Mineral Leasing Act (MLA) authorizes BLM (as delegated from the Secretary of the Interior) to issue and regulate oil & gas leases on public lands. The MLA provides procedures for issuing leases (i.e. lease sale process) and certain terms that must be included in leases (i.e. annual rental, primary term of leases, royalty), but it does not offer specific provisions regarding how BLM will regulate use of the surface of leases. However, the regulations at 43 CFR Part 3100, which were promulgated to implement the authority granted*

by the MLA, do provide provisions regarding the regulation of the use of surface of oil and gas leases. As stated in this EA, the lease rights granted to lessees derive from 43 CFR 3101.1-2, which provides that a lessee shall have the right to use as much of the leased lands as is necessary to explore for, drill for, mine, extract, remove and dispose of all the leased resources in leasehold subject to: Stipulations attached to the lease; restrictions deriving from specific, non-discretionary statutes; and such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations.Consistent with 43 CFR 3101.1-2, BLM Lease Form 3100-11 provides "the exclusive right to drill for, mine, extract, remove and dispose of all oil and gas (except helium) in the lands…. Rights granted are subject to applicable laws, the terms, conditions, and attached stipulations of this lease, the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, and to regulations…hereinafter promulgated when not inconsistent…"